PUBLIC HEALTH REPORTS

VOL. 45 OCTOBER 3, 1930 No. 40

CONFERENCE ON LEGITIMATE REQUIREMENTS OF NARCOTIC DRUGS, WASHINGTON, D. C., AUGUST 12, 1930

A SUMMARY OF THE PROCEEDINGS[1]

A conference of representatives of medical, dental, pharmaceutical, veterinarian, and other scientific associations and agencies with the Surgeon General of the United States Public Health Service was held in Washington, D. C., August 12, 1930, for the purpose of considering the question of (*a*) the necessity for and (*b*) the methods to be used in making studies and investigations for carrying out the provisions of the act approved June 14, 1930, relating to the quantities of crude opium, coca leaves, and their salts, derivatives and preparations, together with such reserves thereof as are necessary to supply the normal and emergency medicinal and scientific requirements of the United States. The proceedings of that conference are herein briefly reviewed and summarized.

The national organizations represented included the following:

American Dental Association.
American Drug Manufacturers Association.
American Hospital Association.
American Institute of Homeopathy.
American Medical Association.
American Medical Editor's and Authors' Association.
American Pharmaceutical Association.
American Veterinary Medical Association
Bureau of Social Hygiene (Inc.).
Committee on Drug Addictions.
National Medical Association.
National Research Council.
The Chemical Foundation (Inc.).
The National Association of Retail Druggists.
Bureau of Narcotics.
Department of Agriculture, Food, Drug, and Insecticide Administration.
Department of the Interior, Office of Indian Affairs.
Department of the Navy.
State Department.
United States Veterans' Bureau.
War Department.

[1] A full report of the entire proceedings of the conference will be published later.

The conference was opened at 10 a. m., recessed at 12.40 p. m., reconvened at 2.15 p. m., and adjourned at 4.05 p. m., deliberating a total of 4 hours and 30 minutes, under the chairmanship of Surgeon General Hugh S. Cumming.

At the opening of the conference it was explained that the Public Health Service assumed no regulatory functions respecting imports of crude opium or coca leaves, but was acting wholly in the capacity of scientific advisor to the Bureau of Narcotics with reference to the quantities of these drugs needed in the United States for medicinal and scientific purposes. It was also pointed out that the Surgeon General must decide whether or not it is necessary for the Public Health Service to undertake special studies and investigations to determine these needs, and the kind of program to be inaugurated, should special studies and investigations become necessary.

The methods of controlling imports, manufacture, sale, and distribution of narcotic drugs by the Federal Government were reviewed by Mr. Alfred Tennyson, legal adviser of the Bureau of Narcotics, who called attention to the regulation of imports of crude opium and coca leaves by a system of import certificates or permits, and to the regulation of the sale and distribution of narcotic drugs by a system of official order forms used by registrants with the Collector of Internal Revenue. Briefly, the scheme of control involves, first, the importer, the manufacturer, and the compounder, who must report each month to the central authority the quantity of all imports of crude opium and coca leaves, the quantity placed in process of manufacture, the quantity of drugs actually produced, the taxable goods sold, and the quantities furnished each customer; second, the wholesale dealer who sells in original, unbroken, stamped packages, and who submits to the central authority a monthly report of all transactions in narcotic drugs, giving information regarding the quantities received and sold, and to whom consigned. These dealers are called, for purposes of convenience, the producing and wholesale group, comprising class 1 and class 2 registrants under the narcotic laws.

The retailing and dispensing group must obtain their supply of narcotic drugs through the use of official order forms, must be registered with the Collector of Internal Revenue, and must make an annual report of drugs on hand to the central authority. They are not, however, required to submit a monthly return of the disposition of these drugs, such as is required of the class 1 and class 2 registrants. For purposes of convenience, the dispensing group comprises retail druggists or pharmacists, designated as class 3; the practitioners, embracing physicians, veterinary surgeons, and dentists, are grouped as class 4; and those who dispense the so-called exempt preparations containing opium or coca leaves or their derivatives are grouped as

class 5. During the course of discussion, attention was called to the use of a considerable quantity of opium or its derivatives in exempt preparations and that the quantities of opium so used had increased within recent years.

Mr. S. H. Breidenbach, statistician of the Bureau of Narcotics, opened the discussion on the subject of a statistical analysis of sales and distribution of narcotic drugs in the United States with special reference to medicinal requirements. He pointed out that the monthly reports rendered by the manufacturer of these drugs is very detailed and readily available for statistical study. Reports rendered by wholesale dealers are unsatisfactory for statistical analysis, because the kind of narcotic drug contained in preparations sold or purchased is not always stated, and, if stated, is not computed as to narcotic content, nor is the classification of data readily available for statistical analysis.

No reports are submitted to the Bureau of Narcotics respecting the disposition of narcotic drugs by the dispensing groups, embracing the pharmacist, practitioner, and dealer in exempt preparations. There are available, however, data showing the quantities of such drugs purchased by the dispensing group as a whole, but it is not classified in a way that would show the quantities purchased by pharmacists, by physicians or medical practitioners, by veterinarians, by dentists, or by those who deal in exempt preparations.

From the discussions which ensued, it appears that data on file in the Bureau of Narcotics are subject to further analysis and study with reference to the more specific requirements of the dispensing groups, but lack of personnel has made these studies impossible. The method of submitting annual invoices of drugs on hand by the dispensing groups does not lend itself to statistical analysis, however. An analysis of the manufacturers' reports has indicated an increasing amount of opium or its derivatives finding its way into exempt preparations, and a greater proportionate increase in the use of codeine or codeine salts. It is very probable that a larger quantity of opium than that formerly used in the manufacture of heroin has found its way into the manufacture of codeine.

Dr. E. F. Kelly, speaking for the American Pharmaceutical Association, opened the discussion on the specific question of "How important is the theoretical diversion of drugs from legitimate channels, and what rôle can a scientific study of dispensing methods play in determining the extent of such diversions?" An opinion was expressed by that association to the effect that a more nearly complete study and analysis of the information available to those charged with the enforcement of the narcotic law would furnish data respecting diversions of narcotic drugs from legitimate channels, and that such a method of study would be more advantageous than to attempt

a first-hand analysis of dispensing methods. Studies and investigations of infractions of the narcotic laws, and an analysis of diversions of drugs incident thereto, should be supplemental to the analysis of manufacturers' sales already referred to. Attention was called to the necessity for more detailed studies of the enforcement of one phase of the Federal narcotic laws dealing with the subject of exempt preparations with a view to developing greater supervision over the sale and distribution of such preparations.

The subject of exempt preparations was more fully discussed by Dr. R. L. Swain, representing the same association, who pointed out the need for stricter control, and the desirability of eliminating certain preparations and derivatives of opium from the exempt class so as to reduce the likelihood of their being used to satisfy addiction.

In a discussion of the specific question, "Is the present system of analyzing manufacturers' and wholesalers' sales adequate to establish a reasonable estimate of the medicinal and scientific needs of the United States respecting narcotic drugs?", Mr. Carson P. Frailey, executive vice president and secretary of the American Drug Manufacturers Association, requested the legal adviser of the Bureau of Narcotics to make suggestions as to how the present system of determining imports had functioned, and ventured the opinion that previous estimates, based upon an analysis of manufacturers' sales, have been reasonably accurate for the needs of the country without taking into account the necessity of reserves to meet emergencies.

Mr. Alfred Tennyson, in response to this question, considered that an analysis of manufacturers' sales and stocks on hand was a good criterion for determining the medical and legitimate needs, if one could assume a 100 per cent efficiency in enforcement of the narcotic laws. This, he pointed out, was all the more significant when consideration was given to the fact that all transfers of narcotic products down to the consuming classes must take place through official order forms, and that such forms can be obtained only by registrants presumably qualified to deal in narcotic products. Attention was called to the diversion of these drugs from legitimate channels to satisfy addiction.

The total amount of such diversion would be possible, but very difficult, to ascertain; but, even if known, it would be of questionable value in determining the amount necessary for importation because, should imports be reduced by an amount equal to the actual, or even theoretical, diversion, then imports would not meet the country's requirements, since diverting practices would still continue. On the other hand, should no diversion exist, or presuming that the narcotic law enforcement was sufficient to prevent all diversions, then the analysis of manufacturers' sales and stocks could be taken as a reliable criterion of the medicinal requirements.

Further discussion brought to light that an analysis of the monthly returns of purchases of narcotic drugs by the dispensing groups readily indicated which was being used in large or exorbitant quantities. These are subject to scrutiny and investigation to ascertain whether their use is questionable or illegal. The small force available to those charged with administering the narcotic laws makes it impossible to discover all irregular practices of this sort.

Subsequent discussions challenged the assumption that any considerable quantity of narcotic drugs was diverted from legitimate channels by the dispensing classes, and that such diversion was practically nil, if any, from the manufacturing, compounding, and wholesale groups.

Mr. J. K. Caldwell, of the State Department, who has had five years' experience as a member of the Federal Narcotics Control Board, commented upon the interpretation of "medical and scientific needs." Thus, if medical and scientific needs respecting narcotic drugs are to be interpreted as heretofore, manufacturers' sales are an adequate criterion for these needs. On the other hand, should these needs be interpreted as only the amounts used in good faith in the bona fide practice of the several professions using them, the quantity of such drugs diverted from legal channels should be subtracted from manufacturers' sales to arrive at an estimate of the country's needs.

In dealing with the specific inquiry as to the necessity for making studies and investigations respecting the quantities of narcotic drugs needed for medicinal and scientific purposes in the United States, the trend of discussion hinged upon an analysis of information now available to those charged with administering the narcotic laws, and that data on file in the Bureau of Narcotics was either subject to further study and investigation or could be collected and supplemented through that channel with less difficulty than by an independent survey undertaken directly by the United States Public Health Service.

Taking into account the present organization for law enforcement and the possibility of preventing diversions of narcotic drugs from legitimate channels with the machinery at hand, it was the tenor of the conference that the present system of analyzing manufacturers' sales offered, for the time being, a reasonable solution for determining the medicinal and scientific needs respecting narcotic drugs for the United States. With full appreciation of these results, the conference continued to discuss further items on the agenda.

At the afternoon session the principles involved in previous studies and investigations respecting medicinal needs were discussed by a representative of the State Department, the United States Public Health Service, and the committee on drug addictions. Mr. J. K.

Caldwell, representing the State Department, called attention to the interest of other governments in studies of this character, and stated that the problem of controlling the abuse of narcotic drugs was not only a domestic one but an international one as well. It was pointed out that The Hague Convention required Governments to limit the amount of manufacture of narcotic drugs to medicinal and legitimate purposes. Up to the present, no Government has undertaken a special study of these needs that would provide complete and adequate data, although an effort was made by the League of Nations to ascertain these needs by questionnaire sent to the various powers. Each Government answered in its own way, or not at all. In some instances the results obtained were largely based upon hospital uses and health insurance data; and in others on the formula of importation plus manufacture, minus exports, taking no account of diversions. As a result, inadequate information was available for the League of Nations conference of 1924.

The conference recently called by the League of Nations is faced with the problem of limiting the manufacture of narcotic drugs to medicinal and legitimate needs. Thus far the formula for the United States is "manufacture less exports."

Dr. G. W. McCoy, Director of the National Institute of Health, discussed the survey undertaken by the Public Health Service in Allegany County, Md., in 1924, to ascertain the narcotic requirements of a restricted area in order to obtain a reliable basis for computing the requirements of the country as a whole. The method of approach involved a personal canvass of every registrant legally authorized to deal in narcotic drugs, with the result that approximately 7 grains of opium and 29 grains of cocaine were the annual per capita requirements. These were the requirements of approximately 70,000 people, without any account being taken of the amount necessary to meet emergencies. These results included the so-called exempt preparations, which constituted about 4 per cent of the requirements of opium.

Dr. C. E. Terry, of New York, discussed the surveys undertaken under the auspices of the committee on drug addictions, of which he is executive secretary. Like the Public Health Service survey, the surveys of the committee on drug addictions were concerned with a detailed study of the legal narcotic uses, the technique employed being an analysis of the "record-keeping machinery," registrants' records required by the Federal narcotic laws.

The first surveys were undertaken in six communities of approximately 100,000 population each, widely scattered, and therefore embraced about 600,000 population. The per capita legal uses of narcotic drugs, expressed in opium equivalence, varied considerably for these six communities, ranging from 3.5 to 17 grains of opium. In

three the annual per capita legal use was 5, 6, and 7 grains of opium, respectively. In one it was between 13 and 14 grains. Because of the wide variations in per capita uses, an attempt was made to analyze further the data respecting these six communities. A more comprehensive analysis of "registrants' records" was undertaken in a large urban-suburban community with a population of approximately 1,625,000. The per capita legal use is represented by approximately 9 grains of opium. Data were also obtained by questionnaire of the legal use of these drugs in hospitals and institutions throughout the United States during the 12 months' period ending June 30, 1924. From these data there was obtained an average annual narcotic-drug requirement per hospital bed.

The communities surveyed by the committee on drug addictions represented approximately a total population of 2,200,000 persons, or about 2 per cent of the total population of the United States. Taking into account the results of an analysis of "registrants' records," as provided under the Federal narcotic law and the hospital uses, the per capita requirement represents approximately 8½ grains (8.56 grains) of opium per annum. This requirement does not take into account any quantities necessary to meet emergencies.

In the discussion which ensued, it was pointed out that the records of retail sales of exempt preparations were not satisfactory for analysis and it was necessary to return to the wholesale or manufacturers' sales figures for reliable data concerning these preparations. It was also shown that the importation of approximately 150,000 pounds of opium during the years 1926 and 1927 was almost parallel with the estimated requirements of approximately 8½ grains per capita.

Col. John D. McLean, of the American Hospital Association, opened the discussion upon the subject of the advisability of analyzing the records of general and special hospitals or institutions with reference to the indispensable uses, ill-advised uses, and diversions from legitimate channels of narcotic drugs as a basis for determining the normal medicinal and scientific requirements, and what official and unofficial agencies may be expected to furnish this information. As a preliminary to the discussion of this particular subject, Colonel McLean had undertaken a brief and cursory survey of the Philadelphia General Hospital at Philadelphia, Pa., which treats approximately 20,000 patients each year. This cursory survey showed that during the year 1927 the per capita patient requirement was 1.85 grains of morphine; in 1928, 1.5; and in 1929, 1.3. There has been a great increase in the amount of codeine used in the past several years. In 1929 each patient of the 20,000 treated averaged 7.5 grains of codeine. In 1928 the per capita was 6 grains of codeine. The survey with respect to the quantities of cocaine used indicated a per capita monthly requirement of 1 grain of cocaine.

Colonel McLean also analyzed a small tuberculosis hospital treating 793 patients during the year 1929. The per capita requirement was one-eightieth of a grain of morphine each day, and each patient received one-tenth of a grain of codeine each day. Diversions to illegitimate channels in these two hospitals is practically negligible, and attention was called to the necessity of preventing diversions in hospital practice. In further discussion Colonel McLean pointed out that a proper supervision of records available to those engaged in administering both Federal and State narcotic laws should give information complete enough to arrive at a definite conclusion as to the amounts of narcotic drugs that are required in this country. An analysis of the quantities of narcotic drugs legally used in a representative group of hospitals might serve as a basis for computing the annual requirements concerning the medicinal needs, however. Studies and investigations as to the uses of these drugs and the needs of the practicing physician probably constitute a very difficult problem. They might be made, however, by studies of the records of prescriptions issued and the quantities of narcotic drugs dispensed by groups of physicians attached to the hospitals surveyed.

Dr. A. C. Boylston, of the American Drug Manufacturers Association, brought up the question as to whether such studies and investigations were to be perpetual in character, and pointed out that ideas of physicians respecting the prescribing of narcotic drugs were constantly changing and called attention to the decrease in the quantity of morphine sold and a corresponding increase in the quantity of codeine sold. The increasing tendency to use codeine in lieu of morphine would affect materially the quantity of crude opium importations, because it requires approximately six times as much opium to provide a dose of codeine as it does to provide a dose of morphine.

There then ensued some discussion as to the addiction properties of codeine, and it was the sense of the conference that codeine in itself had either questionable or practically no addiction properties, and that probably it would be desirable to place as few restrictions as possible about its use. It was pointed out, however, that an individual having acquired tolerance to morphine may use codeine to satisfy addiction, although codeine would not be the drug of choice, a peculiar crossed tolerance being acquired.

Dr. William C. Woodward, representing the American Medical Association, sounded a word of caution that the conference should not leave the impression that there was no such thing as a codeine addict. Such addicts have been observed by reputable and competent physicians. The removal of restrictions from the use of codeine would render possible a traffic for illicit purposes.

In further discussion of the advisability of analyzing hospital records, Mr. S. L. Hilton, of the American Pharmaceutical Association, called attention to the necessity for control of narcotics in hospitals, and the desirability of their being under the supervision of one person and reported upon at regular intervals. Mr. Hilton, in discussing the advisability of analyzing prescription records on file in pharmacies, with reference to the indispensable uses, ill-advised uses, and diversions from legitimate channels, of narcotic drugs as a basis for determining the normal and scientific requirements, and what official and unofficial agencies may be expected to furnish this information, pointed out that there were some 50,000 to 55,000 pharmacists in the United States and it would be a monumental task to analyze the prescriptions in their files. He thought it possible, however, that certain State organizations might be willing to assist in determining exactly what was being done by retail pharmacists. In general, Mr. Hilton was of the opinion that there should be some analysis of prescriptions on file in pharmacies, with special reference to where and for what purpose excessive amounts of drugs are being prescribed and dispensed. This representation assumed the flavor of a regulatory function in an effort to stop illegitimate uses.

Colonel McLean, of the American Hospital Association, in discussing the question of analyzing pharmacists' records, pointed out that they were required to make monthly reports by local and State narcotic laws, and that those charged with administering the State narcotic laws, particularly in Pennsylvania, make close checks upon the prescriptions on file.

Dr. C. E. Terry reported some experiences resulting from the analysis of prescriptions on file, showing that a large number of drug addicts were being furnished supplies through the legal channels and that those who were border-line addicts were also receiving large quantities. He discussed some ill-advised uses of narcotic drugs, especially the placing of considerable quantities of morphine in the hands of inexperienced persons for self-medication, and the ill-advised combination of opium or its derivatives with other drugs and pointed out the danger of producing addiction through this ill-advised use. He thought that an analysis of pharmacists' records and physicians' and dispensing records was a most important matter, because of its possibilities in correcting the misuse of narcotic drugs by the medical profession. He pointed out, however, that any attempt seriously to interfere with the legal prescribing of opium or its derivatives might result in very great and undue hardships, that the present day prescribing of these drugs represented medical custom, and that any corrective measures must, of necessity, involve the question of medical education.

Proceeding with the other items on the agenda, discussion of the questions "The advisability of analyzing the records of dispensing physicians with reference to the indispensable uses, the ill-advised uses, and diversions from legitimate channels, of narcotic drugs * * *" and "The advisability of analyzing the records of pharmacists and dispensing physicians with reference to the indispensable uses, ill-advised uses, and diversions from legitimate channels of the so-called exempt preparations containing narcotic drugs, and what official and unofficial agencies may be expected to furnish these data," was opened by Dr. William C. Woodward, of the American Medical Association. Doctor Woodward thought that there would be no special difficulty in checking up the prescription records of practicing physicians, but that there would be, in different parts of the country, a considerable variation in customs and practices as to the use of these drugs, and that a variable norm would be the theoretical expectation. Because of this variability, he considered the problem a complicated one. He further pointed out that an analysis of methods of prescribing by physicians involves directly the activities of the machinery engaged in administering the narcotic laws, and that this machinery must take into account the question of individual judgment of physicians on the one hand and willful violation of the law, on the other hand.

Asst. Surg. Gen. R. C. Williams, of the United States Public Health Service, opened the discussion upon the advisability of utilizing morbidity and mortality reports and statistics as a basis for estimating the sickness expectancy rate for various types of illnesses and utilizing such data for arriving at the amount of narcotic drugs required for medicinal purposes. He called attention to the survey conducted by the Public Health Service of the sickness incidence in Washington County, Md., and of the sickness incidence of New York State, and stated that data of this sort might be utilized in computing the expectancy of narcotic drug needs, and that such data might be used in helping to determine the requirements of narcotic drugs to meet emergency needs incident to epidemics.

The next question on the agenda was "The advisability of undertaking an educational program on the indispensable uses of narcotic drugs and what official and unofficial agencies may be expected to contribute to such a program," and Dr. William Charles White, chairman of the drug committee of the National Research Council, was asked to comment upon this phase of the subject. In his discussion Doctor White drew a parallel to the educational campaigns that have been carried on, not only with reference to the drug-addiction situation, but with reference to tuberculosis, cancer, syphilis, and alcohol, without seeking a wider and broader program of prevention. He called attention to the work of the drug committee of the National

Research Council, which was faced with the problem of education and has come to the conclusion that the proper unit of education was through the physician and his clientele, and that any educational program to be effective must be carried on through the physician, out of which could grow the education of the public. Such an education must necessarily be in the hands of physicians. It appeared desirable to obtain a composite and authoritative cross-section opinion of the desirable uses of these drugs in the practice of medicine and in the treatment of specific types of illnesses. To meet such a need and to evolve informative memoranda which might be placed in the hands of practicing physicians, it was proposed that the cooperation of the American Medical Association, through its Council of Pharmacy and Chemistry, the drug committee of the National Research Council, the United States Public Health Service, and a group of representative members of the professions, be enlisted for the preparation of such memoranda. Progress has already been made in this direction through the Journal of the American Medical Association, which has accepted the task of revising articles written by individuals and passed upon by these various organizations which will be, eventually, available for utilization by the practicing physician and ultimately reflect itself in his clientele.

Further discussion indicated the desirability of replacing the present legitimate use of derivatives of opium and its preparations by some substance which might be expected to possess the physiological action of opium less its addiction properties. Such a situation has already developed in the medical and dental professions with reference to cocaine.

Dr. Mark Finley, representing the American Dental Association, emphasized the decreasing quantities of cocaine used by the dental profession and the desire of the American Dental Association to cooperate in every way possible to prevent the diversion of narcotic drugs from legitimate channels.

The comments of Mr. Robert P. Fischelis, representing the American Medical Editors' and Authors' Association, who is also secretary of the Board of Pharmacy of the State of New Jersey, called attention to the possibilities and the dangers of addiction to habit-forming drugs being caused through the use of so-called exempt preparations and to the work of the Board of Pharmacy of New Jersey in the matter of restricting the number of dealers in these exempt preparations. He mentioned also the cooperation obtained through those charged with the enforcement of the Federal narcotic laws. He pointed out, however, the necessity for an educational campaign for better control of the exempt preparations.

Prof. E. G. Eberle, editor of the American Pharmaceutical Journal, thought that the Pharmaceutical Association of Secretaries and the

law-enforcement officials having to do with pharmaceutical matters might be interested in an educational program.

Prof. Reid Hunt, of the Harvard Medical School, representing the National Research Council and the American Medical Association, called attention to the progress which has been made in the past 50 years in the evolution of drugs which have sedative and pain-relieving qualities, and the possibilities of finding some substitute for opium or its derivatives. The possibilities of substituting other drugs for opium or its derivatives was emphasized by Dr. William C. Woodward, of the American Medical Association, and by Capt. W. H. Bell, of the Navy Department.

Mr. Tennyson, of the Bureau of Narcotics, called attention to the desirability of carrying on an educational program in State and local jurisdictions with reference to the necessity for more uniform State laws and for carrying them into effect. These matters were further brought to the attention of the conference by provision of the act approved June 14, 1930, which authorizes the Treasury Department to cooperate with the several States in the suppression of the abuse of narcotic drugs in their respective jurisdictions.

The Surgeon General evinced an interest in the question of developing a substitute for opium or its derivatives, but pointed out that the evolution of such a synthetic, nonhabit-forming substitute was not germane to the questions before the conference.

Dr. C. Willard Camalier, of the American Dental Association, ventured the opinion that it might be practical to circularize the several registrants as to the quantities of drugs used by them, but mentioned the fact that most of this information would be on file in the Bureau of Narcotics for analysis.

Colonel McLean, representing the American Hospital Association, ventured the suggestion that the association might be requested to establish standards for the purpose of securing better control of narcotic drugs in all hospitals in the association. This was put in the form of a resolution recommending that more specific records be maintained by hospitals seeking to control narcotic drugs. It was seconded by Prof. E. G. Eberle, of the American Pharmaceutical Association, and unanimously carried.

The Surgeon General then called attention to a previous item appearing on the agenda concerning the advisability of analyzing prescription records on file in pharmacies, and Dr. C. E. Terry, of the committee on drug addictions, New York City, believed, from his experience, that no other method could be as valuable for determining the legitimate medical needs. At least it would determine the current medical uses, having no connection, of course, with whether such use be advised or ill advised. Such records, however, are those required for the control of narcotic drugs by Federal narcotic laws,

and only by an analysis and study of these records could one be expected to determine the quantities of these drugs needed. Doctor Terry offered a motion that the Public Health Service study the records, not only of pharmacists but of dispensing physicians, and that such a study should have for its object a determination of the present advised and ill-advised uses of opium and cocaine with the end in view of using this data as a basis for better medical education in the uses of these drugs.

Dr. E. F. Kelly, of the American Pharmaceutical Association, tendered the cooperation of that organization in any study of the records of pharmacists that the Public Health Service might wish to undertake. He called attention to the long record of the American Pharmaceutical Association, which has advocated since 1852 the drastic control of dangerous drugs. He referred to his discussion of the morning, however, when an opinion was expressed that the records which are available to those administering the Federal narcotic laws are probably all sufficient for purposes of analysis. He stated that such records may be supplemented through that particular channel, but that the Public Health Service was the proper agency for giving appropriate advice, and that the American Pharmaceutical Association tenders its offer of support.

Dr. William C. Woodward, of the American Medical Association, called attention to the fact that, while he was a member of the committee appointed by the American Medical Association to attend the conference, he had no authority to represent the views of that association, since the by-laws and constitution provided that the policies of the association could be made only by the house of delegates or, in the absence of the house of delegates, by the board of trustees. He said, however, that the Public Health Service could count upon his cooperation and the cooperation of the several groups represented at the conference. He suggested the appointment of one representative of each of the organizations present to study further the outcome of the conference.

Dr. William Charles White offered a resolution, as expressing the sense of the conference, that the United States Congress should provide funds for carrying out the functions of the agencies of the Government concerned with the problem under discussion. Mr. Carson P. Frailey seconded the resolution on behalf of the American Drug Manufacturers Association, but the Surgeon General expressed the belief that, when the question was placed before responsible officers of the Government and the Bureau of the Budget, sufficient funds would be made available for carrying on the functions. He expressed some embarrassment, as chairman, in putting a motion of this particular kind. Doctor White, therefore, asked that he be permitted to request a vote upon the resolution. This permission

was granted, and the resolution was unanimously agreed upon by the conference.

In closing the conference the Surgeon General expressed his personal appreciation, and the appreciation of those associated with him, for attendance at the conference and for the interest shown in the particular subject under discussion; and he expressed the hope that a smaller group, representing the several organizations present, might be assembled to discuss ways and means of carrying out what seemed to have been the general sense and tenor of the deliberations.

THE TRAINING OF HEALTH OFFICERS [1]

By JOSEPH W. MOUNTIN, *Surgeon, United States Public Health Service, Tennessee State Department of Health, Nashville, Tenn.*

INTRODUCTION

This paper is intended to cover very briefly certain aspects of the training of medical graduates for positions as local health officers. Although it is developed from a background of experience in county health work, it is felt that the principles and plan herein suggested may have more general application. This plan contemplates the setting up of a state-wide program embracing the establishment of educational standards, providing facilities for training, and enforcing certain requirements. What the content of the course should be is fairly obvious and has received considerable attention in discussions of this subject, but the administrative relationships are not so clear cut and seem to have been given little thought. The necessity of having trained health officers should be self-evident; yet, judging from experience in the field of public education, progress toward this end will be slow unless some State agency in administrative charge accepts the responsibility for its promotion and enforcement.

ORGANIZATION AND ADMINISTRATION

Theoretically, professional standards might be enforced by a system of licensing. Such a plan, however, is not likely to be productive of the best results until these standards are more clearly defined and apply to the higher as well as the lower positions in the State. The tendency at the present time seems to be away from licensing and toward basing the salary scale on qualifications. The latter method may be incorporated in the system of State aid. Irrespective of which plan is followed, if it is to succeed on a state-wide basis it must be administered by some central agency. The State health department seems to be the logical agency, and may serve four

[1] Read before the health officers' section of the American Public Health Association at the fifty-eighth annual meeting held at Minneapolis on October 3, 1929.

very necessary functions: (1) Develop an appreciation of the need for professional training; (2) assist in making arrangements for training; (3) provide facilities for field experience; and (4) insure the observance of professional standards. An appreciation of the need for professional training must be developed in the minds of both the workers and the employing agency. The workers must be made to feel a desire for professional advancement, and the employing agents must understand that they can not expect efficient service from persons who are not prepared for the positions. The State health department may assist in creating and organizing facilities for training, but more especially it should lend its aid in bringing about the use of training facilities. This may be accomplished by a system of licensing, or, better, by specifying qualifications of personnel in its plan of financial subsidy to local health organizations. Within certain limitations, this plan of subsidy might well be extended to include aid on a program for training the health officers.

BASIC TRAINING

In the main, four methods of training have been tried: (1) Experience, (2) training stations, (3) academic courses of varying duration, and (4) a combination or modification of the foregoing methods.

Experience.—Under this plan a physician becomes a health officer by being appointed to such a position. His future professional development is determined by his own efforts in a rather restricted environment. Certain States, while still pursuing this plan, have attempted to meet its well-known defects through consultation service from the central office.

Training station.—The general plan in developing a training station is to select a local health department in which high-grade health work is being performed. The trainee is thus afforded an opportunity to gain his experience rapidly under the supervision of the duly appointed and qualified health officer. It soon became apparent to most directors of training stations that the men coming for training were not profiting as they should. There seemed to be two causes: (1) The trainees did not have sufficient basic knowledge of the subject, and (2) the local health department could not absorb more than a few trainees without seriously interfering with its regular duties. As a consequence, training stations were forced to take on the added duty of instruction in fundamentals and were compelled to limit the number of trainees or increase the staff beyond the number required for the performance of the regular work of the department.

Academic courses.—For many years courses in public health of various types have been given under different auspices. They range from the so-called institute of a few days' duration to the full course leading to a degree of doctor of public health. Something more than

brief attendance at a health institute is necessary to prepare a person for a career in public health. On the other hand, it has not been possible as a general rule to induce doctors of public health to accept positions as directors of public health units in any but the more populous and wealthy counties.

Present needs.—Each of the foregoing methods has its merits as well as its weaknesses. The purely practical courses are deficient in that persons with little or no basic training have difficulty in acquiring experience in a short period of time. In the more formal courses there is a tendency to stress abstract sciences and neglect practice. What is needed is a plan of instruction which will combine the resources of teaching institutions and the facilities of administrative health agencies, and in which the fundamental sciences will be woven into a course which is essentially practical in character.

The question of auspices is one of importance. Most public health institutes and training stations are conducted by administrative health agencies. There is a growing tendency for health departments to attempt the training of employees by this method. If this practice continues, present academic standards will break down, and the back-door entrance to public health will be tacitly accepted on a respectable basis. If educational institutions are to retain their rightful positions in the training of health officers, they must recognize the practical needs of administrative health organizations and make the necessary adjustments. On the other hand, administrative health organizations must develop a proper attitude toward scholastic standards and correct methods of instruction required by teaching institutions of recognized standing.

TENNESSEE PLAN

An experiment in training of health officers was begun in Tennessee in the spring of 1928. The course is organized in the department of preventive medicine of Vanderbilt University Medical School and is conducted jointly with the State department of health. In this manner the resources of a teaching institution are coordinated with a health department. The course occupies a period of 12 weeks. The first six weeks are devoted to the fundamental subjects and the last six weeks are spent in a county health department. The intramural instruction is conducted in the nature of round-table discussions and observation of methods pursued in the clinics and the divisions of the State department of health. During the period spent in a county the trainees actually enter into the routine work of the county health department. In doing so they follow a definite schedule, keep accurate notes, and periodically meet in conferences for the purpose of discussing the several activities.

A definite attempt is made to appraise the ability of the student by his performance in the field and the reactions he manifests at seminars which are held at intervals during the period of training. Throughout the course the trainee is made to feel that he has joined an organization and is learning the business. On the other hand, however, he is constantly aware of the fact that he is in training for a definite purpose. His record determines whether he will be employed and the type of position to which he will be appointed. The completion of this course or evidence of equivalent instruction and experience is a requirement of the State department of health for employment as director of a county health department in Tennessee.

Results.—Two classes of six members each have been organized. Two trainees resigned during the course, and one was dismissed because of lack of adaptability; nine completed the course. Eight of these are now employed in Tennessee. Their performance has been far above the average, and it seems reasonable to attribute their success in part at least to the training received under this plan. It is the intention of the department to begin another course in October of this year.

CONSULTATION SERVICE

No plan of training, unless it be prolonged unduly, will equip a health officer for every job he is called upon to perform. It is necessary for the State health department to maintain a staff of specialists in public health, such as sanitary engineers, statisticians, child hygienists, epidemiologists, etc., whose services will be available to the local health officer. While the primary function of these specialists is to assist the local health officer with his problems, this contact affords an excellent opportunity for the health officer to obtain expert instruction on the problems which are of special concern to him. In this manner, too, the State health department will be able to increase the usefulness of the local health officer to the community, and thereby place in the local department of health the responsibility for the solution of local problems.

SUBSEQUENT INSTRUCTION

In the smaller health organizations the motivating influence is very largely centered in the health officer, and, as a consequence, the program tends to become stereotyped and stale unless the health officer is afforded an opportunity to return periodically and learn of advances in science and improvements in practice. Such courses should be provided and should vary both in length and subject

matter in order to meet the needs of the health officer. However, they should be correlated in such a manner that when pieced together they embrace a comprehensive plan of instruction. When academic standards become such as to meet the requirements of the more formal and extensive courses, credit or some other recognition may be arranged.

EXTENDED COURSES

Encouragement should be given to persons seeking detailed information on special subjects, and to others who may wish to acquire a broad grasp of the whole field of public health. Persons desiring these types of instruction should enter the well-organized schools of hygiene or the research institutions, since training of this character is not contemplated in the plan outlined above except in so far as the State health department may assist State and local workers in availing themselves of such facilities.

SUMMARY

The administrative health officer should be trained for his work. This training should cover fundamentals and should afford an opportunity to acquire experience in the practical conduct of the work of a health department. A course of this type will necessitate a close coordination of a teaching institution and an administrative health organization. However, such training facilities are not likely to be used extensively unless a system is perfected which will provide means whereby training can be made readily available, and unless there be some provision for making training a qualification for employment and advancement. The State health department seems to be the agency best able to sponsor a plan of training; however, the actual teaching should be under the management of an educational institution such as a department of preventive medicine in a medical school or a school of hygiene. The local health agencies should cooperate, particularly for the purpose of making available their facilities for acquiring experience in practical public-health administration. An approach to the whole subject of training on a comprehensive basis was begun in Tennessee during the spring of 1928 under the joint auspices of the department of preventive medicine of Vanderbilt Medical School and the Tennessee State Department of Public Health. Experience up to the present time indicates that it will be successful in Tennessee. It should be possible to adopt this plan or certain modifications of it in any State if the State health department participates in local health service and can affiliate with a teaching institution which is in position to assume responsibility for the administration of the course as well as a major part of the actual teaching.

A NOTE ON THE "ZONE PHENOMENON" IN HUMAN SERA

A COMPARISON OF ANTITULARENSE WITH ANTIABORTUS SERA

By R. R. SPENCER, *Surgeon, United States Public Health Service*

During a period of 18 months (November, 1928, to May, 1930) the National Institute of Health (formerly Hygienic Laboratory) has received 2,000 samples of human sera from various sections of the United States for diagnosis of undulant fever or tularaemia. There were 1,369 samples with a request for testing against *B. abortus* or *B. melitensis*, and 831 requests for testing against *B. tularense*. Many physicians requested that their samples be run against the antigens of both diseases. Therefore, as a routine procedure, and regardless of the specific request, each sample was tested for agglutinins against both *B. abortus* and *B. tularense*.

TECHNIQUE

The macroscopic agglutination test was employed throughout with a total volume of 1 c. c. in each tube of the dilution series. The turbidity of all antigens in the final dilutions was equivalent to a silica standard of 250. The symbol "4" represents 75 to 100 per cent agglutination; "3" represents 50 to 75 per cent agglutination; "2" represents 25 to 50 per cent agglutination; "1" represents 1 to 25 per cent agglutination; and "0" represents no agglutination. All tubes were incubated two hours at 37° C. and placed in the ice box for 18 hours before a reading was made.

We have not considered a serum as being positive or diagnostic unless the tubes containing a dilution of 1:80, or higher, showed definite flocculation.

RESULTS OF TESTS

Of the 2,000 human sera, 329 were positive against *B. tularense*. Sixty-five of these, or 19.7 per cent, showed a definite inhibition zone in one or more tubes. (Table 1.)

Of the 179 positive abortus sera, 54, or 30.1 per cent, showed a zone of inhibition. (Table 2.)

TABLE 1.—*The zone of inhibition as exhibited by 65 antitularense human sera from a total positive antitularense area of 334*

	Serum No.	Dilution									
		10	20	40	80	160	320	640	1,280	2,560	5,120
1	209	2	2	2	4	4	4	0	0	0	0
2	212	2	4	4	4	4	4	4	2	0	0
3	271	2	4	4	4	4	4	0	0	0	0
4	310	0	2	4	4	4	4	4	0	0	0
5	398	2	4	4	4	4	4	4	4	----	----
6	416	2	4	4	4	4	4	4	4	----	----
7	561	2	4	4	2	0	0	0	0	0	0
8	690	3	4	4	4	3	0	0	0	0	0
9	714	0	0	4	4	4	3	1	0	0	0
10	717	3	4	4	4	0	0	0	0	0	0
11	760	3	4	4	4	4	4	4	0	0	0
12	777	2	4	4	4	0	0	0	0	0	0
13	872	0	4	4	4	4	4	4	4	----	----
14	875	2	4	4	4	4	4	1	0	0	0
15	888	0	4	4	4	4	4	4	0	0	0
16	1206	0	0	2	4	4	4	4	4	4	4
17	1207	0	2	2	4	4	4	4	4	4	4
18	1264	0	4	4	4	4	2	0	0	0	0
19	1272	3	4	4	4	4	4	4	3	0	----
20	1294	1	2	3	4	4	1	0	0	0	----
21	1319	0	0	4	4	0	0	0	0	0	0
22	1348	3	4	4	4	3	0	0	0	----	----
23	1361	3	4	4	4	4	4	4	0	----	----
24	1394	3	4	4	4	4	4	0	0	----	----
25	1406	2	4	4	4	4	4	4	2	0	----
26	1407	1	4	4	4	4	4	4	1	----	----
27	1413	0	4	4	4	4	4	4	2	----	----
28	1443	2	4	3	1	0	0	0	0	----	----
29	1448	2	3	4	4	4	2	0	0	----	----
30	1449	2	3	4	4	0	0	0	0	----	----
31	1465	0	2	4	4	4	4	0	0	----	----
32	1473	3	4	4	4	4	4	2	0	----	----
33	1483	3	4	4	4	4	4	4	4	----	----
34	1489	2	4	4	4	4	4	3	0	----	----
35	1504	3	4	4	4	4	4	4	0	----	----
36	1507	0	4	4	4	4	4	2	0	----	----
37	1516	0	4	4	4	4	4	4	0	----	----
38	1544	0	4	4	4	4	4	0	0	----	----
39	1563	3	4	4	4	4	4	4	3	----	----
40	1564	3	4	4	4	4	4	4	4	2	0
41	1566	3	4	4	4	4	4	4	4	4	0
42	1567	2	4	4	2	0	0	0	0	----	----
43	1570	2	4	4	4	4	4	4	4	4	0
44	1571	3	4	4	4	0	0	0	0	----	----
45	1578	0	4	4	4	4	4	4	4	3	0
46	1581	0	4	4	4	4	4	4	0	----	----
47	1586	0	3	4	4	4	4	4	4	0	----
48	1587	0	4	4	4	4	4	4	4	4	----
49	1588	0	3	4	4	4	4	4	4	0	----
50	1590	0	0	0	2	2	0	0	0	----	----
51	1612	1	2	3	4	4	4	4	4	0	----
52	1627	3	4	4	4	4	4	4	2	0	----
53	1633	2	4	4	4	4	4	4	4	0	----
54	1649	0	4	4	4	4	4	4	3	----	----
55	1679	3	3	4	4	4	4	4	4	2	0
56	1769	0	4	4	4	4	3	0	0	----	----
57	1837	2	4	4	4	4	4	4	3	----	----
58	1872	3	4	4	4	4	0	0	0	----	----
59	1922	2	4	4	4	4	4	4	0	----	----
60	1944	3	4	4	4	4	4	0	0	----	----
61	2037	1	2	3	4	4	4	0	0	----	----
62	2047	2	4	4	4	4	4	2	0	----	----
63	2071	3	4	4	4	4	4	4	4	0	----
64	2087	2	4	4	4	4	4	0	0	----	----
65	2140	2	4	4	4	4	4	4	4	4	0

In the series of 54 antiabortus sera showing zones, there were 4 showing a middle zone (Nos. 6, 14, 24, and 46, in Table 2). On the other hand, not one of the 65 antitularense sera showing a zone produced a middle zone. Furthermore, in the antiabortus series the prezones were usually wider than in the antitularense series. For example, in the antiabortus series one sample (No. 18) showed pre-

zoning up to and including the 1 : 160 dilution; 6 showed zoning up to the 1 : 80 dilution; 19 showed it up to the 1 : 40 dilution; and 41 up to the 1 : 20 dilution. In contrast with this it may be seen that in the antitularense series no zoning occurred as far as the 1 : 160 or the 1 : 80 dilution, and only 7 showed zoning in a dilution of 1 : 40 and 16 in a dilution of 1 : 20.

TABLE 2.—*The zone of inhibition as shown by 54 antiabortus human sera from a total of 181 positive sera*

	Serum No.	Dilution										
		10	20	40	80	160	320	640	1,280	2,560	5,120	10,240
1	63	0	2	4	4	4	4	4	2			
2	107	2	2	2	4	4	4	4	4			
3	355	0	2	4	4	4	4	2	0			
4	516	0	2	2	4	4	0	0	0			
5	569	0	0	2	4	4	4	4	4			
6	683	4	4	2	0	0	0	2	4	4	2	0
7	741	0	1	4	4	4	4	1	0			
8	794	0	2	4	4	4	4	4	2			
9	861	0	0	2	4	4	4	4	4			
10	881	0	0	0	0	4	4	4	4	0		
11	886	0	0	0	4	4	4	4	4	4	4	0
12	891	0	0	0	0	4	4	4	4	2	0	
13	1015	0	1	4	4	4	3	0	0			
14	1073	4	0	4	4	4	4	4	4	4	0	
15	1080	0	0	4	4	4	4	4	2	0		
16	1089	0	2	4	4	4	4	0	0			
17	1119	2	3	4	4	2	1	0	0			
18	1158	2	2	2	2	3	4	2	0			
19	1171	0	0	2	4	4	4	0	0			
20	1197	0	0	4	4	4	4	4	4	4	4	2
21	1200	0	0	3	4	4	4	4	4	4	4	0
22	1208	0	0	2	3	4	4	4	4	4	3	0
23	1215	0	0	3	4	4	4	2	0			
24	1281	2	2	1	4	4	4	4	4	4	2	0
25	1288	3	3	4	4	4	4	4	2			
26	1347	0	2	4	4	4	4	4	4	4	0	
27	1376	3	3	4	4	4	4	4	2			
28	1475	0	4	4	4	4	4	4	2	0	0	
29	1514	3	4	4	2	0	0	0	0			
30	1542	0	0	4	4	4	4	4	4	0	0	
31	1549	3	4	4	4	4	4	4	3			
32	1593	3	4	4	4	3	0	0	0			
33	1600	3	4	4	4	4	4	4	4	2	0	
34	1670	1	4	4	4	4	0	0	0			
35	1681	3	3	4	4	4	4	4	3			
36	1682	0	3	3	4	4	4	4	4	3	0	
37	1759	0	0	4	4	4	3	0	0			
38	1785	0	0	0	4	4	4	4	4	2	0	
39	1790	2	2	3	3	4	3	0	0			
40	1797	2	2	3	3	3	0	0	0			
41	1832	1	4	4	4	3	1	0	0			
42	1869	2	4	4	4	4	4	4	4	4	0	
43	1892	1	2	3	3	0	0	0	0			
44	1915	0	1	2	3	0	0	0	0			
45	1933	0	0	3	4	3	0	0	0			
46	1964	3	3	2	2	3	4	4	4			
47	1966	3	4	4	4	1	0	0	0			
48	1978	3	3	3	4	4	4	4	4	4	3	0
49	2012	0	0	0	3	4	4	1	0			
50	2013	1	2	4	4	4	4	4	4			
51	2019	2	3	4	1	0	0	0	0			
52	2046	0	3	4	4	4	3	0	0			
53	2079	3	3	4	4	4	4	4	4	3	1	0
54	2144	0	3	4	4	3	0	0	0			

COMMENT

We have no explanation for the fact that the antiabortus series gave more and wider zones of inhibition, but these results suggest that there is a qualitative difference in the behavior of agglutinins induced by different antigens.

CURRENT PREVALENCE OF COMMUNICABLE DISEASES IN THE UNITED STATES [1]

August 10–September 6, 1930

The prevalence of certain important communicable diseases, as indicated by weekly telegraphic reports from State health departments to the Public Health Service, is summarized below. The underlying statistical data are published weekly in the Public Health Reports under the section entitled "Prevalence of Disease."

Poliomyelitis.—During the current 4-week period, 1,269 cases of poliomyelitis were reported, as compared with 838 during the preceding four weeks and 410 for the same period last year. Stated otherwise, the current incidence is a little greater than three times the incidence for the corresponding period of last year. During the preceding period of this year, the incidence was slightly less than three times the incidence of the corresponding period of last year. Judged by this criterion, and it is to be emphasized that there are other standards of measuring epidemicity, the epidemic wave has risen slightly when allowance has been made for the expected seasonal rise.

An examination of specific regions shows that the picture varied widely from region to region. In the Mountain and Pacific groups of States, the incidence declined in the last two 4-week periods from 330 reported cases to 259; in the South Central groups (lower Mississippi Valley) the decline was from 190 reported cases to 141. The remaining groups, on the other hand, showed increases as follows: The North Atlantic group rose from 134 reported cases to 358; the East North Central (Great Lakes) group from 37 to 118; the West North Central group from 121 to 358; and the South Atlantic group from 29 to 35.

September or October seems normally to have the seasonal peak of the poliomyelitis incidence; and with the two sections already on the down grade it is perhaps reasonable to hope that a decline will soon be under way in most of the other sections of the country.

Meningococcus meningitis.—The reported incidence of meningococcus meningitis for the period under report was 333 cases, as compared with 321 for the preceding period. The incidence is below that of the corresponding period of 1929, when the reported cases numbered 374.

Scarlet fever.—The incidence of scarlet fever was somewhat below the average; the reported cases numbered 2,501, as against 2,895 for the same period last year.

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[1] From the Office of Statistical Investigations, United States Public Health Service. The numbers of States reporting for the various diseases are as follows: Typhoid fever, 41; poliomyelitis, 43; meningococcus meningitis, 42; smallpox, 42; measles, 38; diphtheria, 42; scarlet fever, 41; influenza, 31.

Smallpox.—During the spring smallpox ran considerably ahead of the average for the period during recent years, but it declined sharply during the warm weather. During the current 4-week period 520 cases were reported as against 570 for the same period last year, and 459 the year before.

Measles.—The current incidence of measles was relatively low, 2,016 cases being reported during the four weeks under consideration, which was slightly below the figures for the corresponding period during each of the last two years.

Influenza.—Influenza continued on its recent low level, with 365 cases reported. This is about one-fifth less than the 1929 figure for the period, and hardly one-fourth of the incidence for that period in 1928.

Diphtheria.—The incidence of diphtheria continues to be the lowest on record. The reported cases number 2,353, as against 3,260 for the same period last year.

Typhoid fever.—During the months preceding June of this year, the typhoid fever incidence had been at record low levels. During the last two 4-week periods, however, the reported incidence rose, being 2,928 cases and 3,357 cases, respectively, as against 2,630 and 2,684 cases for the corresponding periods last year.

Mortality, all causes.—According to data from the Health Index of the Bureau of the Census the mortality from all causes during the current period was 10 per thousand population—annual basis. Last year the rate was slightly higher, averaging 10.8.

DEATH RATES IN A GROUP OF INSURED PERSONS

Rates for Principal Causes of Death for July, 1930

The accompanying table, taken from the Statistical Bulletin for August, 1930, issued by the Metropolitan Life Insurance Co., presents the mortality record of the industrial insurance department of the company for July, 1930, as compared with that for the preceding month and for the corresponding month of last year. It also gives the cumulative rates for the period January–July for the years 1930 and 1929. These rates are based on a strength of approximately 19,000,000 insured persons in the United States and Canada.

The Bulletin states:

> Although the July death rate among American and Canadian wage-earners and their families was a little above the average for that month, the cumulative mortality rate for the seven elapsed months of 1930 showed a marked reduction as compared with last year. For policyholders living west of the Rocky Mountains, the July death rate was 6 per thousand, as compared with 6.8 last year; in the rest of the United States, the 1930 figure was 8.6, as compared with 8.5, and in Canada, 8.2 against 7.8. In all sections of both countries the cumulative

death rate for the January–July period was well below that for the like part of last year.

In spite of the slight setback in July, there is still excellent prospect that the completed year 1930 will register the lowest death rate of all time, not only among the wage-earning populations of the United States and Canada, but among the population at large. There has been no widespread prevalence of any infectious or contagious disease; and all of the diseases which are the more sensitive indices of the state of the public health are recording death rates well below the average. The cumulative mortality for the group of four principal epidemic diseases of childhood, for example, is only 18.7 per 100,000, as compared with 23.3 for the like period of 1929. This marks a decline of 20 per cent in a single year. Only eight years ago (at this time of the year) the death rate for diphtheria alone was about the same as the combined rates, in 1930, for diphtheria, measles, scarlet fever and whooping cough. The diphtheria death rate for the January–July period (6.7 per hundred thousand) marks a reduction of 28 per cent from that for the like period of 1929.

The 1930 mortality record for tuberculosis becomes more and more favorable. The reduction in the death rate for all forms of tuberculous disease, up to the end of July, was 9.1 per cent; for tuberculosis of the respiratory system alone, it was 10.9 per cent. Last year we were not able to announce until December the certainty that the 1929 mortality rate for tuberculosis would be the lowest ever recorded up to that time in the United States. This year the gain has been so much more pronounced that, on the basis of only seven months' data, it has become a certainty that 1930 will register a new minimum for tuberculosis; and there is a strong probability that the largest year-to-year drop of all time will be accomplished.

There are still other noteworthy items in the health record of 1930. The influenza death rate is approximately 30 per cent of last year's figure, and that for pneumonia has dropped sharply. The mortality from the principal "degenerative" conditions has declined; deaths from diabetes, which have been increasing persistently in recent years, have been less numerous in 1930. Even the cancer death rate is running slightly below that for 1929, after showing an almost unbroken rise over a long period of years. The mortality rate for diseases incidental to pregnancy and childbirth is 12.4 per cent below the figure for the corresponding part of 1929. A new low point for these diseases will be reached in 1930.

Death rates (annual basis) per 100,000 for principal causes of death, July, 1930

[Industrial department, Metropolitan Life Insurance Co.]

Cause of death	Rate per 100,000 lives exposed*				
	July, 1930	June, 1930	July, 1929	Cumulative, January–July	
				1930	1929
Total, all causes	843.7	832.5	838.3	912.6	1,019.9
Typhoid fever	2.6	1.9	3.3	1.5	1.9
Measles	2.3	5.5	2.7	4.3	4.3
Scarlet fever	1.8	2.1	2.4	3.1	3.3
Whooping cough	4.9	3.9	5.9	4.6	6.4
Diphtheria	4.3	3.6	6.6	6.7	9.3
Influenza	4.2	7.9	5.3	18.7	63.5
Tuberculosis (all forms)	85.0	82.8	88.6	85.5	94.1
Tuberculosis of respiratory system	74.4	71.9	77.3	74.2	83.3
Cancer	79.3	76.1	80.0	76.5	78.2
Diabetes mellitus	16.7	15.6	15.7	19.2	20.2
Cerebral hemorrhage	60.2	57.6	†54.2	61.9	†61.2
Organic diseases of heart	133.7	139.6	125.9	153.2	160.3
Pneumonia (all forms)	39.2	58.4	40.0	92.5	113.7
Other respiratory diseases	10.2	11.8	8.5	12.2	13.7
Diarrhea and enteritis	22.9	15.9	20.8	14.0	15.3
Bright's disease (chronic nephritis)	66.9	69.9	63.6	70.5	73.8
Puerperal state	11.4	12.0	14.7	12.7	14.5
Suicides	9.3	9.9	8.1	9.6	8.8
Homicides	7.8	4.9	6.2	6.5	6.3
Other external causes (excluding suicides and homicides)	80.1	61.9	80.6	60.6	62.8
Traumatism by automobiles	22.2	20.1	23.1	18.8	18.0
All other causes	200.9	191.3	205.2	198.9	208.2

*All figures in this table include insured infants under 1 year of age. The rates for 1930 are subject to slight correction, as they are based on provisional estimates of lives exposed to risk.
†Rate not comparable with that for 1930.

COURT DECISION RELATING TO PUBLIC HEALTH

Establishment of tuberculosis hospitals in towns.—(New York Supreme Court, Appellate Division; Jewish Consumptives' Relief Soc. *v.* Town of Woodbury et al., 243 N. Y. S. 686; decided June 23, 1930.) Under the public health law it was necessary, when a person, association, corporation, or municipality proposed to establish a tuberculosis hospital in a town, to file with the State health commissioner a petition containing certain prescribed information and requesting a hearing. The commissioner and the local health officer were constituted a board to approve or disapprove the establishment of such hospital and the location thereof. In the event of a disagreement, provision was made for referring the matter to another board consisting of three designated State officials.

The plaintiff corporation sought to establish a tuberculosis hospital in the town of Woodbury. The State health commissioner and the local health officer, acting as a board as provided by statute, disagreed. The matter was referred to the other board provided for such a contingency, and said board approved the plaintiff's petition and granted permission for the establishment of a tuberculosis hospital on the site described, but upon the condition that said permission should

not be effective if the establishment of the hospital on such site was prohibited by any statute of the State or valid town ordinance.

Other portions of the public health law declared that tuberculosis was an infectious and communicable disease, dangerous to the public health, and imposed requirements as to reports of cases, sputum examination, disinfection, etc.

Certain sections of the town law authorized towns to adopt zoning ordinances, the law stating that the power given was "For the purpose of promoting the health, safety, morals, or the general welfare of the community." The law provided for districts, and within such districts the town could regulate and restrict the erection, construction, reconstruction, alteration, or use of buildings, structures, or land. Neither in that part of the town law dealing with zoning nor in any other part of the town law were hospitals referred to. Under the town law a town had power to provide ordinances of various kinds, including ordinances for the protection of property, the preservation of peace and good order, the preservation of health, etc.

The town of Woodbury adopted a zoning ordinance, one section of which read as follows:

> No hospitals or sanatoria for the treatment of either contagious or noncontagious diseases, dispensaries or correctional institutions shall be established, built, or maintained in either district No. 1 or district No. 2 or district No. 3 or district No. 4, and no hospitals for the treatment of contagious diseases or tuberculosis shall be established, built, or maintained in district No. 5.

The plaintiff's property was in districts Nos. 1 and 5. The use in district No. 1 was limited to residences, while the use in district No. 5 was not limited except as shown by the above-quoted section of the ordinance.

The plaintiff brought suit to enjoin the enforcement of the zoning ordinance. The trial court dismissed the complaint and plaintiff appealed. The appellate court stated the question thus:

> Does the town zoning statute override the public health law provisions in whole or in part? The State has declared that tuberculosis institutions may be established in towns. Do the zoning laws permit the town to prohibit that which the public health law permits? The State has declared a policy by virtue of the public health law. Have the zoning laws worked a repeal thereof so far as towns are concerned?

The judgment of the trial court was reversed by the appellate court, which directed judgment for the plaintiff for the relief demanded. In the course of its opinion, the court said:

> * * * The towns of the State of New York have only such powers as are conferred by statute. [Case cited.] The authority of a municipality to abrogate State law is never implied or inferred. It is only derived from express grant, never from a general grant of power. A State policy may not be ignored by a municipality unless it is specifically empowered so to do in terms clear and explicit.

[Citations.] The power to adopt zoning regulations under article 17–C of the town law is a general grant of power for the purpose of promoting the health, safety, and morals or the general welfare of the community, and permitting ordinances to regulate and restrict, among other things, the location and use of buildings, structures, and land for trade, industry, residence, or other purposes. It does not override the general law in so far as tuberculosis is concerned. A public policy so clearly stated by the legislature may not be lightly thrust aside. Even if this power to restrict could be construed to cover a particular use which is authorized by general law, such construction will not be made in the absence of express words to that effect or in the use of language which clearly and unequivocally shows an intent of the legislature to have it made.

Upon this basis, the town of Woodbury had no authority by ordinance to prohibit an establishment for the care of those afflicted with tuberculosis. While this ordinance does not in terms so prohibit, that is the effect of it. * * *

* * * Of course, if the State adopts a valid law upon a given subject, and the legislature sees fit to give the municipality a power to the contrary, the latter supersedes the former. This is not such a case, because the power to enact ordinances for the benefit of the public health, and these zoning regulations, can not be said to be in abrogation of the State's policy as indicated by the public health law. It must be borne in mind that an ordinance has the same force as legislation [case cited], and it requires clear language in a city charter or in the act giving powers to a town indicative of an intent to repeal the general law, before such an intent will be inferred. * * *

The court then considered the question as to whether the town, although it had no right to exclude tuberculosis hospitals, had the power to limit the places where such hospitals could be established, provided the zoning regulations were reasonable and for the welfare of the town. Answering this question, the court said:

* * * However, in the face of the specific grant to State authorities under the public health law, it should not be held that the general grant under the town law is sufficient to give the town power to exclude such institutions from any part of the town. [Case cited.] The towns had no such power immediately before the town zoning statute was enacted. In the absence of clear expression of intent on the part of the legislature so to do, it should not be held that the public health law was even to this extent repealed or modified. * * *

DEATHS DURING WEEK ENDED SEPTEMBER 13, 1930

Summary of information received by telegraph from industrial insurance companies for the week ended September 13, 1930, and corresponding week of 1929. (From the Weekly Health Index, issued by the Bureau of the Census, Department of Commerce)

	Week ended Sept. 13, 1930	Corresponding week, 1929
Policies in force	75, 388, 681	74, 676, 551
Number of death claims	12, 760	12, 725
Death claims per 1,000 policies in force, annual rate	8. 8	8. 9

Deaths [1] from all causes in certain large cities of the United States during the week ended September 13, 1930, infant mortality, annual death rate, and comparison with corresponding week of 1929. (From the Weekly Health Index, issued by the Bureau of the Census, Department of Commerce)

[The rates published in this summary are based upon mid-year population estimates derived from the 1930 census. The rates are not exactly comparable with similar rates published in the Public Health Reports earlier than the issue of August 22, 1930, which were based upon estimates made before the 1930 census was taken]

City	Week ended Sept. 13, 1930				Corresponding week 1929		Death rate [2] for first 37 weeks	
	Total deaths	Death rate [2]	Deaths under 1 year	Infant mortality rate [3]	Death rate [2]	Deaths under 1 year	1930	1929
Total (78 cities)	6,451	9.7	693	[4] 55	10.0	708	12.2	13.0
Akron	27	5.5	7	65	9.1	11	8.0	9.6
Albany [5]	23	9.4	1	21	16.5	8	15.1	16.5
Atlanta	67	13.0	7	72	19.7	17	16.2	16.3
White	26		4	63		9		
Colored	41	(6)	3	86	(6)	8	(6)	(6)
Baltimore [5]	154	10.0	15	52	10.3	19	14.2	15.0
White	116		9	40		17		
Colored	38	(6)	6	96	(6)	2	(6)	(6)
Birmingham	37	7.4	3	29	11.6	10	14.0	16.7
White	17		3	48		3		
Colored	20	(6)	0	0	(6)	7	(6)	(6)
Boston	166	11.0	20	58	10.5	17	14.2	15.6
Bridgeport	24	8.5	2	34	11.0	5	11.3	12.5
Buffalo	126	11.4	14	62	10.3	8	13.2	14.4
Cambridge	17	7.8	1	20	6.9	2	11.8	12.9
Camden	22	9.8	4	70	14.2	8	14.0	14.8
Canton	18	8.9	1	27	6.5	3	10.2	11.5
Chicago [5]	567	8.7	55	49	9.0	60	10.5	11.5
Cincinnati	123	14.2	14	82	13.0	12	15.8	17.4
Cleveland	155	8.9	12	36	9.9	17	11.3	12.9
Columbus	57	10.2	5	49	13.5	5	15.9	15.2
Dallas	42	8.3	4		8.4	6	11.8	11.9
White	28		3			5		
Colored	14	(6)	1		(6)	1	(6)	(6)
Dayton	45	11.7	5	75	10.1	5	10.6	11.6
Denver	81	14.6	19	207	10.8	7	15.0	15.1
Des Moines	31	11.3	5	92	14.0	2	12.0	11.9
Detroit	233	7.7	28	43	8.9	45	9.5	11.5
Duluth	21	10.8	2	54	5.7	0	11.3	11.6
El Paso	27	13.7	5		13.0	4	18.0	20.4
Erie	17	7.6	3	66	10.9	2	11.4	12.7
Fall River [5] [7]	21	9.6	2	46	5.9	4	12.2	14.3
Flint	23	7.6	5	59	6.9	3	9.3	10.7
Fort Worth	34	11.0	11		8.2	3	11.3	12.9
White	24		2			3		
Colored	10	(6)	9		(6)	0	(6)	(6)
Grand Rapids	24	7.4	2	30	9.1	5	10.4	10.3
Houston	62	11.1	9		12.3	8	12.4	13.0
White	47		9			7		
Colored	15	(6)	0		(6)	1	(6)	(6)
Indianapolis	85	12.1	12	90	10.3	7	14.9	15.0
White	74		9	78		5		
Colored	11	(6)	3	175	(6)	2	(6)	(6)
Jersey City	44	7.3	6	52	9.3	9	11.5	12.8
Kansas City, Kans	27	11.5	3	70	5.6	1	11.6	13.6
White	25		3	83		1		
Colored	2	(6)	0	0	(6)	0	(6)	(6)
Kansas City, Mo	105	13.9	11	92	11.6	11	13.7	14.3
Knoxville	32	15.7	5	117	18.1	2	14.1	14.0
White	29		5	130		1		
Colored	3	(6)	0	0	(6)	1	(6)	(6)
Los Angeles	232	9.7	21	63	9.0	22	11.2	11.6
Louisville	67	11.3	13	111	9.5	8	13.9	15.3
White	47		9	89		7		
Colored	20	(6)	4	265	(6)	1	(6)	(6)
Lowell [7]	18	9.4	0	0	10.3	1	13.7	14.6
Lynn	17	8.7	2	56	10.2	1	10.7	11.6
Memphis	89	18.3	12	141	19.4	10	17.8	19.6
White	51		9	163		4		
Colored	38	(6)	3	101	(6)	6	(6)	(6)
Milwaukee	87	7.9	9	39	8.8	11	9.9	11.3
Minneapolis	90	10.1	7	46	8.8	5	10.8	11.1

Foofnotes at end of table.

Deaths [1] from all causes in certain large cities of the United States during the week ended September 13, 1930, infant mortality, annual death rate, and comparison with corresponding week of 1929. (From the Weekly Health Index, issued by the Bureau of the Census, Department of Commerce)—Continued

City	Week ended Sept. 13, 1930				Corresponding week 1929		Death rate [2] for first 37 weeks	
	Total deaths	Death rate [2]	Deaths under 1 year	Infant mortality rate [3]	Death rate [2]	Deaths under 1 year	1930	1929
Nashville	42	14.9	4	63	10.0	4	12.7	19.4
White	23		3	63		2		
Colored	19	(6)	1	62	(6)	2	(6)	(6)
New Bedford [7]	18	8.3	0	0	3.7	1	11.0	12.7
New Haven	33	10.6	0	0	9.6	1	13.1	13.6
New Orleans	125	14.2	5	28	14.6	14	17.8	18.0
White	81		4	34		4		
Colored	44	(6)	1	16	(6)	10	(6)	(6)
New York	1,133	8.4	108	45	8.6	116	11.0	11.6
Bronx Borough	169	6.9	9	26	5.9	9	8.1	8.4
Brooklyn Borough	378	7.6	49	51	7.7	42	9.9	10.5
Manhattan Borough	423	11.9	40	51	12.2	51	16.5	16.9
Queens Borough	123	5.9	8	32	6.6	11	7.2	7.8
Richmond Borough	40	13.2	2	39	14.2	3	14.8	16.2
Newark, N. J	74	8.7	6	31	8.7	16	12.2	13.1
Oakland	60	10.9	9	112	9.9	3	11.1	11.6
Oklahoma City	43	12.1	8	144	12.4	8	10.9	10.9
Omaha	32	7.8	2	24	10.1	2	13.7	14.0
Paterson	17	6.4	4	70	14.3	3	12.5	13.7
Philadelphia	393	10.4	53	79	11.2	32	12.7	13.5
Pittsburgh	143	11.1	19	67	12.6	15	14.0	15.1
Portland, Oreg	51	8.9	1	12	8.8	2	12.4	13.0
Providence	51	10.6	4	37	12.7	8	13.3	15.0
Richmond	35	10.0	6	87	12.3	2	15.1	16.6
White	15		2	44		1		
Colored	20	(6)	4	171	(6)	1	(6)	(6)
Rochester	43	6.9	8	71	9.7	4	11.7	12.8
St. Louis	167	10.6	10	35	9.7	10	14.5	15.0
St. Paul	56	10.7	5	51	7.4	3	10.3	10.7
Salt Lake City [4]	17	6.3	2	32	10.9	7	12.5	13.2
San Antonio	54	11.0	7		9.3	6	15.6	15.0
San Diego	41	14.3	2	42	8.4	1	14.6	15.4
San Francisco	164	13.6	10	68	11.8	4	13.3	13.4
Schenectady	10	5.4	1	31	7.7	4	11.3	12.7
Seattle	75	10.7	2	20	8.0	1	11.1	11.2
Somerville	15	7.5	2	63	7.6	1	9.9	9.4
Spokane	31	14.0	5	130	11.8	2	12.5	13.1
Springfield, Mass	25	8.7	1	17	10.9	1	12.3	13.0
Syracuse	31	7.8	6	74	10.7	1	11.9	13.6
Tacoma	21	10.2	1	27	9.8	1	12.7	11.9
Toledo	57	10.2	7	64	11.9	10	12.7	13.9
Trenton	30	12.7	8	154	13.2	7	17.0	17.4
Utica	29	14.7	1	28	12.8	2	15.0	15.7
Washington, D. C	96	10.3	11	64	11.1	15	15.4	15.7
White	61		4	35		7		
Colored	35	(6)	7	125	(6)	8	(6)	(6)
Waterbury	16	8.2	2	49	6.8	4	9.9	9.7
Wilmington, Del. [7]	18	8.9	1	24	16.8	4	14.7	14.3
Worcester	25	6.6	1	14	9.4	5	12.9	12.9
Yonkers	13	5.0	2	48	10.2	2	8.1	9.5
Youngstown	30	9.2	7	100	15.0	2	10.2	12.5

[1] Deaths of nonresidents are included. Stillbirths are excluded.

[2] These rates represent annual rates per 1,000 population, as estimated for 1930 and 1929 by the arithmetical method.

[3] Deaths under 1 year of age per 1,000 live births. Cities left blank are not in the registration area for births.

[4] Data for 73 cities.

[5] Deaths for week ended Friday.

[6] For the cities for which deaths are shown by color the colored population in 1920 constituted the following percentages of the total population: Atlanta, 31; Baltimore, 15; Birmingham, 39; Dallas, 15; Fort Worth, 14; Houston, 25; Indianapolis, 11; Kansas City, Kans., 14; Knoxville, 15; Louisville, 17; Memphis, 38; Nashville, 30; New Orleans, 26; Richmond, 32; and Washington, D. C., 25.

[7] Population Apr. 1, 1930; decreased 1920 to 1930; no estimate made.

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

CURRENT WEEKLY STATE REPORTS

These reports are preliminary, and the figures are subject to change when later returns are received by the State health officers

Reports for Weeks Ended September 20, 1930, and September 21, 1929

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended September 20, 1930, and September 21, 1929

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Sept. 20, 1930	Week ended Sept. 21, 1929	Week ended Sept. 20, 1930	Week ended Sept. 21, 1929	Week ended Sept. 20, 1930	Week ended Sept. 21, 1929	Week ended Sept. 20, 1930	Week ended Sept. 21, 1929
New England States:								
Maine	4	2			90	6	0	0
New Hampshire	7	3			1		0	0
Vermont					1	8	0	0
Massachusetts	38	48			17	20	3	3
Rhode Island	5	4		1	3	1	0	0
Connecticut	3	18	3	1	3	4	0	0
Middle Atlantic States:								
New York	54	78	[1] 5	[1] 6	42	46	8	12
New Jersey	38	69	1	1	14	8	4	5
Pennsylvania	80	73			45	45	5	4
East North Central States:								
Ohio	19	23	7	3	12	46	0	0
Indiana	23	15			4	5	5	3
Illinois	101	114	8	19	9	19	4	5
Michigan	36	75	1	1	19	50	12	14
Wisconsin	4	17	15	22	18	34	0	0
West North Central States:								
Minnesota	10	12	2		2	4	0	0
Iowa	6	5			6	2	1	0
Missouri	15	22	1	3	10	7	2	6
North Dakota	4	5				5	0	1
South Dakota	6	3	2				0	0
Nebraska	6	5	2		15	6	3	0
Kansas	6	21	2		4	18	2	4
South Atlantic States:								
Delaware					1	1	0	0
Maryland [2]	7	14	2	3	3	2	0	0
District of Columbia	8	7			7	1	0	0
Virginia								
West Virginia	25	16	1	7	10	1	0	0
North Carolina	81	211	8		1	5	2	1
South Carolina	41	54	186				0	0
Georgia	18	39	11	16	26	4	1	3
Florida	5	20		1	2	1	0	0

[1] New York City only.

[2] Week ended Friday.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended September 20, 1930, and September 21, 1929—Continued

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Sept. 20, 1930	Week ended Sept. 21, 1929	Week ended Sept. 20, 1930	Week ended Sept. 21, 1929	Week ended Sept. 20, 1930	Week ended Sept. 21, 1929	Week ended Sept. 20, 1930	Week ended Sept. 21, 1929
East South Central States:								
Kentucky	22	17	2	36	7	2	0	1
Tennessee	26	63	4	7	5	5	2	0
Alabama	15	57					1	1
Mississippi							0	1
West South Central States:								
Arkansas	3	7	2	4		4	1	1
Louisiana	18	24	1		1	16	0	1
Oklahoma [1]	19	48	7	20	1	6	0	0
Texas	11	30	3	19	2	1	0	0
Mountain States:								
Montana		4			1	5	0	2
Idaho		2			2	2	0	1
Wyoming	1					1	0	2
Colorado	6	7			2	2	1	0
New Mexico	4	5			3		1	0
Arizona	8		1		4	2	2	0
Utah [2]		2	8			1	3	2
Pacific States:								
Washington	4	6			6	2	1	11
Oregon	1	3	7	5	23	3	0	1
California	16	37	11	10	41	32	3	6

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Sept. 20, 1930	Week ended Sept. 21, 1929	Week ended Sept. 20, 1930	Week ended Sept. 21, 1929	Week ended Sept. 20, 1930	Week ended Sept. 21, 1929	Week ended Sept. 20, 1930	Week ended Sept. 21, 1929
New England States:								
Maine	18	1	9	12	0	0	6	2
New Hampshire	3	1	1	5	0	0	2	0
Vermont	0	5	1	9	0	0	0	0
Massachusetts	26	3	59	63	0	0	12	12
Rhode Island	6	9	4	4	0	0	3	2
Connecticut	8	0	17	9	0	0	0	25
Middle Atlantic States:								
New York	61	33	69	70	0	3	31	39
New Jersey	2	3	37	34	0	0	6	13
Pennsylvania	12	12	101	75	0	0	84	42
East North Central States:								
Ohio	42	5	62	62	15	20	44	32
Indiana	13	0	44	30	16	19	15	12
Illinois	27	4	92	177	18	17	46	32
Michigan	13	13	70	89	7	19	47	10
Wisconsin	8	1	32	38	5	9	11	6
West North Central States:								
Minnesota	18	1	26	57	1	2	4	4
Iowa	18	5	13	18	4	4	5	10
Missouri	14	0	14	39	1	24	28	15
North Dakota	3	1	3	4	0	1	7	4
South Dakota	3	0	3		2	0	4	1
Nebraska	22	0	12	13	13	1	1	0
Kansas	65	1	32	35	3	6	9	11
South Atlantic States:								
Delaware	1	0	4		0	0	3	4
Maryland [2]	1	0	11	30	0	0	50	19
District of Columbia	0	0	3	3	0	0	4	2
Virginia		10						
West Virginia	1	2	21	44	6	5	51	38
North Carolina	1	4	65	105	1	9	33	27
South Carolina	2	3	18	21	0	1	49	30
Georgia	3	0	11	18	0	0	32	44
Florida	0	0	2	4	0	0	4	2

[1] Week ended Friday.
[2] Figures for 1930 are exclusive of Oklahoma City and Tulsa.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended September 20, 1930, and September 21, 1929—Continued

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Sept. 20, 1930	Week ended Sept. 21, 1929	Week ended Sept. 20, 1930	Week ended Sept. 21, 1929	Week ended Sept. 20, 1930	Week ended Sept. 21, 1929	Week ended Sept. 20, 1930	Week ended Sept. 21, 1929
East South Central States:								
Kentucky	0	0	25	14	2	0	37	15
Tennessee	1	1	23	33	1	0	37	41
Alabama	1	3	27	36	9	0	49	38
Mississippi	2	0	8	21	2	0	28	25
West South Central States:								
Arkansas	1	0	7	10	4	0	28	26
Louisiana	8	0	13	16	2	0	34	10
Oklahoma [2]	6	2	8	24	4	2	40	37
Texas	5	0	6	13	2	3	20	20
Mountain States:								
Montana	1	0	7	7	0	5	7	46
Idaho	1	0	2	6	0	3	1	3
Wyoming	12	0	2	----	0	0	1	0
Colorado	7	0	7	10	1	2	10	5
New Mexico	0	1	2	3	0	3	21	15
Arizona	1	0	4	----	0	0	11	2
Utah [2]	0	3	2	7	0	2	0	3
Pacific States:								
Washington	0	1	29	21	6	7	1	9
Oregon	0	3	8	5	0	2	4	4
California	66	5	34	71	3	22	20	7

[1] Week ended Friday.
[2] Figures for 1930 are exclusive of Oklahoma City and Tulsa.

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of cases reported monthly by States is published weekly and covers only those States from which reports are received during the current week:

State	Cerebrospinal meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever
August, 1930										
Colorado	5	28	----	1	65	----	13	34	4	47
Idaho	3	7	1	----	13	----	2	8	8	4
Illinois	27	258	13	89	75	1	58	235	79	167
Louisiana	5	41	24	88	20	48	69	23	0	153
Maryland	2	41	13	3	18	----	8	34	0	240
Minnesota	10	48	8	----	19	----	80	59	11	27
New York	58	237	----	16	603	----	182	234	1	113
North Carolina	6	244	2	----	16	658	13	136	11	238
Ohio	16	101	27	19	97	----	100	234	42	199
West Virginia	----	44	10	----	43	----	5	58	19	245
Wisconsin	15	51	54	----	255	----	17	108	23	32

August, 1930

Anthrax:	Cases
Colorado	1
Louisiana	2
Chicken pox:	
Idaho	11
Illinois	100
Louisiana	1
Maryland	13
Minnesota	33
New York	184
North Carolina	32
Ohio	157
West Virginia	15
Wisconsin	136
Conjunctivitis:	Cases
Idaho	1
Diarrhea:	
Maryland	92
Diarrhea and enteritis (under 2 years):	
Ohio	105
Dysentery:	
Colorado	1
Illinois	109
Louisiana	4
Maryland	44
Minnesota	11
Minnesota (amebic)	3
New York	28
Ohio	11

	Cases
Food poisoning:	
Ohio	11
German measles:	
Colorado	2
Illinois	12
Maryland	1
New York	43
North Carolina	8
Ohio	4
Wisconsin	9
Hookworm disease:	
Louisiana	23
Impetigo contagiosa:	
Colorado	2
Maryland	4
Lead poisoning:	
Illinois	6
Ohio	1
Lethargic encephalitis:	
Colorado	1
Illinois	2
Louisiana	2
Minnesota	1
New York	8
Wisconsin	5
Mumps:	
Colorado	61
Idaho	2
Illinois	172
Louisiana	6
Maryland	13
New York	243
Ohio	61
Wisconsin	140
Ophthalmia neonatorum:	
Idaho	1
Illinois	48
Louisiana	3
New York	6
North Carolina	3
Ohio	88
Wisconsin	1
Paratyphoid fever:	
Idaho	4
Illinois	6
Louisiana	1
New York	3
North Carolina	6
Ohio	2
Puerperal fever:	
Illinois	4
New York	3
Ohio	8
Rabies in animals:	
Idaho	1
Illinois	3
Louisiana	15
Maryland	5
New York	2

	Cases
Rabies in man:	
New York	[1] 1
Ohio	1
Septic sore throat:	
Illinois	8
Maryland	3
New York	9
North Carolina	11
Ohio	44
Scabies:	
Maryland	1
Tetanus:	
Illinois	8
Louisiana	7
Maryland	5
New York	14
Trachoma:	
Illinois	8
New York	5
Ohio	6
Trichinosis:	
Colorado	1
Illinois	1
Tularaemia:	
Illinois	1
Louisiana	2
Wisconsin	1
Typhus fever:	
Maryland	6
North Carolina	4
Undulant fever:	
Illinois	4
Louisiana	3
Maryland	1
Minnesota	4
New York	6
Ohio	5
Wisconsin	2
Vincent's angina:	
Colorado	3
Illinois	3
Maryland	6
New York	[1] 82
Whooping cough:	
Colorado	199
Idaho	60
Illinois	652
Louisiana	34
Maryland	123
Minnesota	101
New York	1,418
North Carolina	437
Ohio	401
West Virginia	145
Wisconsin	930

[1] In New York City.

[1] Exclusive of New York City.

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

The 97 cities reporting cases used in the following table are situated in all parts of the country and have an estimated aggregate population of more than 32,060,000. The estimated population of the 90 cities reporting deaths is more than 30,465,000. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Weeks ended September 13, 1930, and September 14, 1929

	1930	1929	Estimated expectancy
Cases reported			
Diphtheria:			
46 States	877	1,262	----------
97 cities	280	390	542
Measles:			
45 States	392	473	----------
97 cities	99	97	----------
Meningococcus meningitis:			
46 States	74	114	----------
97 cities	35	54	----------
Poliomyelitis:			
46 States	490	153	----------
Scarlet fever:			
46 States	995	1,238	----------
97 cities	314	327	379
Smallpox:			
46 States	134	180	----------
97 cities	21	17	10
Typhoid fever:			
46 States	978	883	----------
97 cities	164	130	172
Deaths reported			
Influenza and pneumonia:			
90 cities	340	333	----------
Smallpox:			
90 cities	0	0	----------

City reports for week ended September 13, 1930

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrence the number of cases of the disease under consideration that may be expected to occur during a certain week in the absence of epidemics. It is based on reports to the Public Health Service during the past nine years. It is in most instances the median number of cases reported in the corresponding weeks of the preceding years. When the reports include several epidemics, or when for other reasons the median is unsatisfactory, the epidemic periods are excluded, and the estimated expectancy is the mean number of cases reported for the week during nonepidemic years.

If the reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1921 is included. In obtaining the estimated expectancy, the figures are smoothed when necessary to avoid abrupt deviation from the usual trend. For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy.

Division, State, and city	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
		Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND								
Maine:								
Portland	0	0	1		0	0	6	3
New Hampshire:								
Concord	0	0	0		0	0	0	1
Manchester	0	0	0		0	0	0	2
Nashua	0	0	0		0	0	0	0
Vermont:								
Barre	1	0	1		0	0	0	0
Burlington	3	0	0		0	0	0	0
Massachusetts:								
Boston	6	18	6		0	15	1	13
Fall River	0	2	2		0	0	0	1
Springfield	5	2	0		0	0	6	2
Worcester	0	3	10		0	0	0	0
Rhode Island:								
Pawtucket	0	0	1		0	0	0	4
Providence	0	3	2		0	0	0	1
Connecticut:								
Bridgeport	0	3	0		0	0	0	1
Hartford	1	1	2		0	2	0	0
New Haven	0	1	0		0	0	0	2
MIDDLE ATLANTIC								
New York:								
Buffalo	2	9	5		1	0	1	9
New York	13	85	24	6	5	25	15	80
Rochester	0	2	7		0	1	0	1
Syracuse	5	2	0		0	2	2	3
New Jersey:								
Camden	2	2	0	1	1	2	2	0
Newark	4	7	1		0	0	2	6
Trenton	1	2	0		0	0	0	2
Pennsylvania:								
Philadelphia	5	33	14	4	1	10	10	26
Pittsburgh	5	13	6		0	2	0	13
Reading	0	1	1		0	0	1	0
EAST NORTH CENTRAL								
Ohio:								
Cincinnati	1	6	1		1	0	2	3
Cleveland	12	24	4	1	0	3	7	5
Columbus	1	2	2	1	2	0	0	2
Toledo	0	4	1		0	1	0	2
Indiana:								
Fort Wayne	0	2	0		0	0	0	4
Indianapolis	0	5	1		0	0	0	5
South Bend	1	1	0		0	0	0	1
Terre Haute	0	1	1		0	0	0	4
Illinois:								
Chicago	9	55	64	2	1	5	4	22
Springfield	0	0	0	1	1	0	0	0
Michigan:								
Detroit	6	32	24		0	3	5	19
Flint	0	2	1		0	1	0	0
Grand Rapids	0	1	0		0	0	0	1

City reports for week ended September 13, 1930—Continued

Division, State, and city	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
		Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
EAST NORTH CENTRAL—continued								
Wisconsin:								
Kenosha	2	0	0		0	0	2	0
Madison	0	1	0			1	0	
Milwaukee	4	7	4		0	2	8	3
Racine	2	1	0		0	1	0	0
Superior	0	1	0		0	0	0	0
WEST NORTH CENTRAL								
Minnesota:								
Duluth	1	0	0		0	0	0	1
Minneapolis	4	17	9		0	0	11	3
St. Paul	3	8	2		0	0	0	2
Iowa:								
Davenport	0	0	0			0	0	
Des Moines	0	1	0			0	0	
Sioux City	0	1	0			0	3	
Waterloo	0	0	1			0	0	
Missouri:								
Kansas City	2	3	0		0	0	0	3
St. Joseph	0	1	0		0	0	1	0
St. Louis	0	20	13			5	3	
North Dakota:								
Fargo	0	0	0		0	0	13	0
Grand Forks	0	0	0			0	0	
South Dakota:								
Aberdeen	0	0	0			0	0	
Sioux Falls	0	0	0			0	0	
Nebraska:								
Omaha	0	6	2		0	1	2	1
Kansas:								
Topeka	1	1	1		0	0	0	3
Wichita	0	2	1		0	2	0	2
SOUTH ATLANTIC								
Delaware:								
Wilmington	0	1	2		0	0	0	0
Maryland:								
Baltimore	5	17	6		0	1	4	16
Cumberland	0	1	0		0	0	0	1
Frederick	0	0	0		0	0	0	0
District of Columbia:								
Washington	1	8	9	1	1	2	0	3
Virginia:								
Lynchburg	0	2	0		0	0	1	0
Norfolk	0	0	2		0	1	0	1
Richmond	0	13	3		0	0	0	1
Roanoke	0	4	4		0	0	0	1
West Virginia:								
Charleston	0	1	0		0	0	32	0
Wheeling	1	1	0		0	0	0	0
North Carolina:								
Raleigh	0	3	2		0	0	0	0
Wilmington	1	0	1		0	0	0	0
Winston-Salem	0	2	0		0	0	0	3
South Carolina:								
Charleston	0	1	1	2	0	0	0	0
Columbia	0	1	0		0	0	2	0
Georgia:								
Atlanta	0	5	5	8	0	0	0	2
Brunswick	0	0	0		0	0	0	0
Savannah		1						
Florida:								
Miami	0	2	3		0	0	0	3
St. Petersburg		0			0			0
Tampa	0	1	1		0	0	0	0

City reports for week ended September 13, 1930—Continued

Division, State, and city	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
		Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
EAST SOUTH CENTRAL								
Kentucky:								
Covington	0	0	0	----	0	1	0	0
Tennessee:								
Memphis	0	3	2	----	1	0	0	2
Nashville	0	4	0	----	0	0	0	1
Alabama:								
Birmingham	1	4	1	----	0	0	0	0
Mobile	0	1	0	----	2	0	0	1
Montgomery	0	2	1	----	----	0	0	----
WEST SOUTH CENTRAL								
Arkansas:								
Fort Smith	0	0	0	----	----	0	0	----
Little Rock	0	0	0	----	0	0	0	1
Louisiana:								
New Orleans	0	8	0	1	0	0	0	6
Shreveport	0	1	2	----	0	1	0	0
Oklahoma:								
Tulsa	0	2	1	----	----	0	0	----
Texas:								
Dallas	1	7	2	----	0	0	0	4
Fort Worth	0	2	1	----	0	0	0	1
Galveston	0	0	0	----	0	0	0	2
Houston	0	4	6	----	0	0	16	2
San Antonio	0	2	3	----	0	0	0	1
MOUNTAIN								
Montana:								
Billings	0	1	0	----	0	0	0	1
Great Falls	0	0	0	----	0	0	0	0
Helena	0	0	0	----	0	0	0	0
Missoula	0	0	0	----	0	0	0	0
Idaho:								
Boise	0	0	0	----	0	0	0	2
Colorado:								
Denver	6	10	4	----	0	1	1	11
Pueblo	0	0	0	----	0	1	3	0
New Mexico:								
Albuquerque	0	0	0	----	0	0	1	0
Arizona:								
Phoenix	1	1	3	----	0	0	0	0
Utah:								
Salt Lake City	1	3	0	----	0	2	0	0
Nevada:								
Reno	0	0	0	----	0	0	0	0
PACIFIC								
Washington:								
Seattle	5	3	0	----	----	2	13	----
Spokane	0	1	0	----	----	1	0	----
Tacoma	0	2	0	----	0	0	0	0
Oregon:								
Portland	0	5	2	----	0	2	6	3
Salem	0	0	0	----	0	0	0	0
California:								
Los Angeles	8	24	5	8	0	2	16	6
Sacramento	0	2	0	----	0	0	9	0
San Francisco	15	11	6	1	0	3	7	4

City reports for week ended September 13, 1930—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
NEW ENGLAND											
Maine:											
Portland	1	0	0	0	0	1	0	0	0	11	25
New Hampshire:											
Concord	0	0	0	0	0	2	0	0	0	0	9
Manchester	1	0	0	0	0	2	0	0	0	0	14
Nashua	0	0	0	0	0	0	0	0	0	0	----
Vermont:											
Barre	0	0	0	0	0	0	0	0	0	3	2
Burlington	0	0	0	0	0	0	0	0	0	0	8
Massachusetts:											
Boston	16	11	0	0	0	5	3	6	0	36	166
Fall River	1	1	0	0	0	2	0	0	0	0	21
Springfield	1	0	0	0	0	0	0	1	0	0	23
Worcester	3	5	0	0	0	1	1	0	0	4	25
Rhode Island:											
Pawtucket	0	0	0	0	0	0	0	0	0	0	21
Providence	2	1	0	0	0	0	2	2	0	15	51
Connecticut:											
Bridgeport	1	2	0	0	0	1	0	0	0	0	24
Hartford	1	2	0	0	0	1	0	0	0	0	23
New Haven	1	1	0	0	0	1	2	0	0	11	30
MIDDLE ATLANTIC											
New York:											
Buffalo	6	4	0	0	0	0	1	2	0	22	124
New York	30	13	0	0	0	90	40	38	2	136	1,133
Rochester	2	9	0	0	0	1	1	1	0	17	42
Syracuse	2	2	0	0	0	0	1	0	0	21	31
New Jersey:											
Camden	0	0	0	0	0	2	1	0	0	1	22
Newark	4	4	0	0	0	4	1	1	0	36	77
Trenton	0	1	0	0	0	1	1	0	0	2	30
Pennsylvania:											
Philadelphia	19	15	0	0	0	18	11	9	0	10	393
Pittsburgh	13	8	0	0	0	11	4	0	0	13	143
Reading	0	1	0	0	0	1	1	1	1	2	23
EAST NORTH CENTRAL											
Ohio:											
Cincinnati	5	6	0	0	0	5	2	3	2	8	123
Cleveland	13	14	0	0	0	11	4	8	0	20	155
Columbus	4	2	0	0	0	0	1	1	0	0	57
Toledo	3	4	0	2	0	2	1	1	1	4	56
Indiana:											
Fort Wayne	1	1	0	0	0	0	2	1	1	0	25
Indianapolis	4	1	0	2	0	4	2	1	0	13	----
South Bend	1	4	0	0	0	3	1	0	0	1	20
Terre Haute	1	2	0	0	0	0	0	0	0	1	26
Illinois:											
Chicago	33	57	0	1	0	40	7	4	1	79	567
Springfield	0	0	0	0	0	0	1	1	0	2	18
Michigan:											
Detroit	29	16	0	0	0	21	4	7	1	62	233
Flint	6	12	0	0	0	1	1	0	0	20	23
Grand Rapids	4	8	0	0	0	0	1	0	0	5	24
Wisconsin:											
Kenosha	0	1	0	0	0	0	0	0	0	0	----
Madison	1	0	0	0	----	----	0	0	----	5	----
Milwaukee	11	6	0	0	0	4	0	1	0	29	87
Racine	2	5	0	0	0	0	0	0	0	0	11
Superior	1	0	0	0	0	0	0	0	0	0	4

City reports for week ended September 13, 1930—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
WEST NORTH CENTRAL											
Minnesota:											
Duluth	5	0	0	0	0	2	0	0	0	3	21
Minneapolis	20	2	0	0	0	3	1	3	0	1	90
St. Paul	8	1	0	0	0	2	1	1	0	12	58
Iowa:											
Davenport	0	1	0	2	----	----	0	0	----	1	----
Des Moines	2	0	0	1	----	----	0	0	----	0	31
Sioux City	0	0	0	0	----	----	0	1	----	6	----
Waterloo	1	0	1	0	----	----	0	0	----	1	----
Missouri:											
Kansas City	4	3	1	0	0	4	2	2	0	2	105
St. Joseph	0	1	1	0	0	0	0	0	0	3	29
St. Louis	11	0	0	0	0	10	6	3	2	10	167
North Dakota:											
Fargo	2	0	0	0	0	1	0	0	0	3	5
Grand Forks	0	0	0	0	----	----	0	0	----	0	----
South Dakota:											
Aberdeen	1	0	0	0	----	----	0	0	----	1	----
Sioux Falls	1	0	1	0	----	----	0	0	----	0	7
Nebraska:											
Omaha	1	8	0	13	0	2	1	1	0	0	32
Kansas:											
Topeka	1	1	0	1	0	0	0	0	0	0	10
Wichita	2	2	0	0	0	1	1	0	0	0	32
SOUTH ATLANTIC											
Delaware:											
Wilmington	0	1	0	0	0	0	0	1	1	0	18
Maryland:											
Baltimore	6	2	0	0	0	8	9	9	1	30	154
Cumberland	0	0	0	0	0	1	0	1	0	0	10
Frederick	0	0	0	0	0	0	0	0	0	0	2
District of Columbia:											
Washington	6	3	0	0	0	3	4	5	1	3	96
Virginia:											
Lynchburg	0	0	0	0	0	1	1	0	1	0	10
Norfolk	1	2	0	0	0	1	1	2	1	2	----
Richmond	4	4	0	0	0	3	2	0	0	0	40
Roanoke	2	1	0	0	0	3	1	0	0	0	24
West Virginia:											
Charleston	1	3	0	0	0	1	2	1	0	1	17
Wheeling	1	1	0	0	0	2	2	0	0	1	15
North Carolina:											
Raleigh	0	0	0	0	0	1	0	0	1	0	14
Wilmington	0	1	0	0	0	0	0	0	0	1	9
Winston-Salem	2	2	1	0	0	0	1	6	0	2	22
South Carolina:											
Charleston	0	2	0	0	0	1	2	5	0	0	22
Columbia	0	0	0	0	0	1	1	0	0	2	20
Georgia:											
Atlanta	5	8	0	0	0	7	3	2	1	1	67
Brunswick	0	0	0	0	0	0	0	3	0	0	5
Savannah	0	----	0	----	----	----	0	----	----	----	----
Florida:											
Miami	0	1	0	0	0	1	1	0	0	0	24
St. Petersburg	0	----	0	----	0	0	0	----	0	----	4
Tampa	1	0	0	0	0	3	0	0	0	0	18
EAST SOUTH CENTRAL											
Kentucky:											
Covington	0	1	0	0	0	0	0	1	0	0	24
Tennessee:											
Memphis	2	0	0	0	0	3	6	2	1	5	89
Nashville	2	3	0	0	0	3	5	4	1	4	42
Alabama:											
Birmingham	4	2	0	0	0	3	5	0	0	0	37
Mobile	0	0	0	0	0	0	0	0	0	0	26
Montgomery	1	0	0	0	----	----	0	1	----	2	----

City reports for week ended September 13, 1930—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
WEST SOUTH CENTRAL											
Arkansas:											
Fort Smith	0	1	0	0	----	----	0	0	----	0	----
Little Rock	1	0	0	0	0	2	1	0	0	0	----
Louisiana:											
New Orleans	2	2	0	0	0	14	4	3	0	2	125
Shreveport	1	0	0	0	0	3	0	0	0	0	22
Oklahoma:											
Tulsa	2	2	0	0	----	----	2	0	----	0	----
Texas:											
Dallas	2	2	1	0	0	2	2	10	1	7	42
Fort Worth	1	0	0	0	0	4	1	1	0	0	34
Galveston	0	0	0	0	0	0	0	0	0	0	9
Houston	1	1	0	0	0	1	0	2	0	8	62
San Antonio	1	1	0	0	0	4	0	0	2	0	54
MOUNTAIN											
Montana											
Billings	0	0	0	0	0	0	0	0	0	7	11
Great Falls	0	2	1	0	0	0	0	0	0	2	3
Helena	0	1	0	0	0	0	0	0	0	7	4
Missoula	0	0	0	0	0	0	0	0	0	0	7
Idaho:											
Boise	0	1	0	0	0	0	0	0	0	1	8
Colorado:											
Denver	4	2	1	0	0	7	2	1	0	25	73
Pueblo	0	0	0	0	0	1	1	3	0	1	13
New Mexico:											
Albuquerque	0	0	0	0	0	4	1	2	0	0	11
Arizona:											
Phoenix	1	0	0	0	0	2	0	0	1	0	7
Utah:											
Salt Lake City	1	3	0	0	0	1	2	[1]3	0	26	17
Nevada:											
Reno	0	0	0	0	0	0	0	0	0	0	3
PACIFIC											
Washington:											
Seattle	4	17	0	1	----	----	2	1	----	9	----
Spokane	3	0	1	1	----	----	1	0	----	3	----
Tacoma	1	2	1	2	0	1	0	0	0	3	21
Oregon:											
Portland	3	1	2	0	0	1	2	2	0	0	51
Salem	0	0	0	0	0	0	0	0	0	1	----
California:											
Los Angeles	10	9	1	0	0	25	3	1	0	35	232
Sacramento	1	1	0	0	0	1	1	0	0	5	25
San Francisco	7	2	0	0	0	7	1	0	0	3	150

[1] Includes nonresidents.

City reports for week ended September 13, 1930—Continued

Division, State, and city	Meningococcus meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
NEW ENGLAND [1]									
Maine:									
Portland	0	0	0	0	0	0	0	7	0
Massachusetts:									
Boston	0	0	1	0		1	3	10	1
MIDDLE ATLANTIC									
New York:									
Buffalo	3	1	0	0	0	0	1	8	0
New York	7	0	1	0	0	0	18	1	0
Rochester	0	0	0	0	0	0	1	8	0
Syracuse	0	0	0	0	0	0	2	8	0
Pennsylvania:									
Philadelphia	0	0	0	0	0	0	1	5	1
Pittsburgh	0	0	0	0	0	0	0	0	1
EAST NORTH CENTRAL									
Ohio:									
Cincinnati	1	0	0	0	0	0	1	5	2
Cleveland	3	1	0	0	0	0	2	12	1
Indiana:									
Fort Wayne	0	0	0	0	0	0	0	1	0
Indianapolis	1	0	0	0	0	0	0	1	0
Illinois:									
Chicago	3	0	0	0	0	0	3	17	5
Springfield	0	0	0	0	0	0	0	3	0
Michigan:									
Detroit	7	3	1	0	0	0	3	6	1
Grand Rapids	0	0	0	0	0	0	0	1	0
Wisconsin:									
Madison	1	0	0	0	0	0	0	0	0
Milwaukee	0	0	0	0	0	0	1	4	1
WEST NORTH CENTRAL									
Minnesota:									
Minneapolis	0	0	0	0	0	0	1	4	0
Iowa:									
Des Moines	0	0	0	0	0	0	1	1	0
Waterloo	1	0	0	0	0	0	0	2	0
Missouri:									
Kansas City [2]	0	0	0	0	0	0	1	1	0
St. Louis	2	0	0	0	0	0	1	0	0
South Dakota:									
Sioux Falls	0	0	0	0	0	0	0	4	0
Kansas:									
Topeka	0	0	0	0	0	0	1	4	1
Wichita	0	0	0	0	0	0	0	2	0
SOUTH ATLANTIC [2]									
District of Columbia:									
Washington [2]	0	0	0	0	0	0	0	0	1
West Virginia:									
Charleston	0	1	0	0	0	0	0	0	0
North Carolina:									
Winston-Salem	0	0	0	0	0	1	0	0	0
South Carolina:									
Charleston [1]	0	0	0	0	2	1	0	0	1
Columbia	1	0	0	0	0	0	0	0	0
Georgia:									
Atlanta	1	1	0	0	0	0	0	0	0

[1] Dengue, 1 death and 1 case: 1 death at Providence, R. I., and 1 case at Charleston, W. Va.
[2] Typhus fever, 18 cases and 9 deaths: 17 cases and 7 deaths at Kansas City, Mo., 1 death at Baltimore, Md., and 1 case and 1 death at Washington, D. C.

City reports for week ended September 13, 1930—Continued

Division, State, and city	Meningococcus meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
EAST SOUTH CENTRAL									
Kentucky:									
Covington	0	0	0	1	0	0	0	1	0
Tennessee:									
Memphis	2	2	0	0	0	0	0	0	0
Alabama:									
Birmingham	1	0	0	0	0	0	1	0	0
Mobile	0	0	0	0	0	1	0	0	0
Montgomery	0	0	0	0	2	0	0	0	0
WEST SOUTH CENTRAL									
Louisiana:									
New Orleans	0	0	0	0	1	0	0	0	0
Oklahoma:									
Tulsa	0	0	0	0	0	0	0	1	0
Texas:									
Dallas	0	0	0	0	2	0	0	1	0
Fort Worth	0	0	0	0	0	1	1	0	0
Houston	0	0	0	0	0	0	0	1	0
San Antonio	0	0	0	0	0	0	0	2	0
MOUNTAIN									
Colorado:									
Denver	0	0	0	0	0	0	0	0	1
PACIFIC									
Oregon:									
Portland	0	0	1	0	0	0	1	0	0
California:									
Los Angeles	2	0	0	0	0	0	1	13	3
San Francisco	0	0	1	0	0	0	0	14	2

The following table gives the rates per 100,000 population for 98 cities for the 5-week period ended September 13, 1930, compared with those for a like period ended September 14, 1929. The population figures used in computing the rates are approximate estimates, authoritative figures for many of the cities not being available. The 98 cities reporting cases have an estimated aggregate population of more than 32,000,000. The 91 cities reporting deaths have more than 30,500,000 estimated population.

Summary of weekly reports from cities, August 10 to September 13, 1930—Annual rates per 100,000 population, compared with rates for the corresponding period of 1929 [1]

DIPHTHERIA CASE RATES

	Week ended—									
	Aug. 16, 1930	Aug. 17, 1929	Aug. 23, 1930	Aug. 24, 1929	Aug. 30, 1930	Aug. 31, 1929	Sept. 6, 1930	Sept. 7, 1929	Sept. 13, 1930	Sept. 14, 1929
98 cities	31	61	34	61	[3] 40	62	[3] 41	[4] 64	[3] 46	66
New England	40	38	40	63	[5] 53	45	35	[4] 46	55	47
Middle Atlantic	23	59	28	58	31	54	31	45	28	41
East North Central	36	86	41	69	46	75	49	86	64	95
West North Central	27	23	25	25	27	25	34	38	55	58
South Atlantic	35	47	37	75	[7] 60	90	60	92	[8] 65	133
East South Central	34	82	13	55	13	116	54	75	27	116
West South Central	52	122	67	141	71	137	[3] 61	133	49	61
Mountain	17	44	43	26	[3] 70	17	43	70	34	26
Pacific	35	31	26	29	19	27	38	34	26	22

MEASLES CASE RATES

98 cities	33	24	28	20	[3] 20	14	[3] 25	[4] 12	[3] 16	16
New England	60	29	60	38	[5] 19	20	33	[4] 21	38	16
Middle Atlantic	41	15	33	13	23	8	28	7	20	12
East North Central	19	35	21	33	8	22	13	16	9	20
West North Central	30	13	19	8	27	8	30	2	15	6
South Atlantic	22	15	18	0	[7] 30	13	26	2	[8] 6	7
East South Central	20	0	7	14	13	7	27	14	7	7
West South Central	7	23	0	4	11	8	[3] 0	4	4	11
Mountain	43	52	26	52	[3] 35	44	51	26	34	61
Pacific	50	46	47	39	35	19	40	46	19	39

SCARLET FEVER CASE RATES

98 cities	31	39	33	41	[3] 42	41	[3] 43	[4] 52	[3] 51	54
New England	51	49	47	45	[5] 53	38	55	[4] 83	51	52
Middle Atlantic	18	17	27	15	28	16	25	25	27	16
East North Central	39	50	35	63	48	63	47	70	85	90
West North Central	28	40	34	58	42	44	57	67	34	58
South Atlantic	26	73	27	34	[7] 67	45	66	64	[8] 53	47
East South Central	54	14	34	68	115	34	67	41	40	96
West South Central	34	38	37	65	15	72	[3] 69	34	26	91
Mountain	43	78	86	44	[3] 88	61	34	17	77	70
Pacific	38	53	33	51	31	46	33	77	73	72

SMALLPOX CASE RATES

98 cities	3	7	2	3	[3] 2	4	[3] 3	[4] 4	[3] 3	3
New England	0	0	0	0	[5] 0	0	0	[4] 0	0	0
Middle Atlantic	0	3	0	0	0	0	0	0	0	0
East North Central	3	16	0	4	0	10	3	10	2	4
West North Central	6	4	8	6	8	4	13	2	27	8
South Atlantic	0	0	2	0	[7] 0	0	4	0	[8] 0	2
East South Central	7	7	0	0	0	0	0	0	0	0
West South Central	4	0	7	8	4	4	[3] 0	0	0	0
Mountain	0	9	0	26	[3] 0	0	0	9	0	9
Pacific	14	12	12	17	12	14	14	14	9	12

[1] The figures given in this table are rates per 100,000 population, annual basis, and not the number of cases reported. Populations used are estimates as of July 1, 1930 and 1929, respectively.
[3] Hartford, Conn., Columbia, S. C., and Helena, Mont., not included.
[4] Fort Smith, Ark., not included.
[5] Pawtucket, R. I., not included.
[7] Savannah, Ga., not included.
[8] Hartford, Conn., not included.
[7] Columbia, S. C., not included.
[8] Helena, Mont., not included.

Summary of weekly reports from cities, August 10 to September 13, 1930—Annual rates per 100,000 population, compared with rates for the corresponding period of 1929—Continued

TYPHOID FEVER CASE RATES

	Week ended—									
	Aug. 16, 1930	Aug. 17, 1929	Aug. 23, 1930	Aug. 24, 1929	Aug. 30, 1930	Aug. 31, 1929	Sept. 6, 1930	Sept. 7, 1929	Sept. 13, 1930	Sept. 14, 1929
98 cities	21	20	19	30	[3] 25	27	[3] 21	[4] 18	[4] 27	21
New England	4	11	16	27	[6] 12	29	11	[4] 2	20	16
Middle Atlantic	15	19	14	34	21	28	22	20	25	18
East North Central	10	5	9	12	10	13	12	13	17	10
West North Central	28	6	21	13	19	23	13	12	21	17
South Atlantic	40	39	55	51	[7] 82	52	53	34	[5] 63	34
East South Central	148	123	88	103	47	103	54	55	54	89
West South Central	45	46	26	88	71	50	[3] 50	15	56	50
Mountain	26	61	26	70	[8] 14	17	9	44	60	70
Pacific	14	17	7	5	9	12	9	14	5	19

INFLUENZA DEATH RATES

91 cities	1	3	3	3	[2] 4	2	3	[4] 3	[5] 3	3
New England	0	0	0	2	[6] 0	0	0	[4] 2	0	0
Middle Atlantic	2	2	3	3	3	2	3	2	4	2
East North Central	0	2	1	4	4	2	2	6	3	2
West North Central	3	3	0	0	3	0	6	0	0	6
South Atlantic	0	0	7	2	[7] 7	2	7	4	[5] 2	2
East South Central	0	22	0	0	7	0	0	7	22	7
West South Central	0	12	4	8	8	4	11	0	0	12
Mountain	0	17	9	9	[8] 0	9	9	0	0	9
Pacific	0	3	9	0	3	0	0	3	0	0

PNEUMONIA DEATH RATES

91 cities	55	57	46	54	[2] 53	55	55	[4] 57	[5] 55	55
New England	38	52	51	25	[6] 48	49	51	[4] 44	62	36
Middle Atlantic	72	71	55	60	60	61	68	75	67	66
East North Central	28	35	28	47	50	51	36	44	43	47
West North Central	27	33	35	48	38	33	50	57	44	45
South Atlantic	68	62	48	73	[7] 52	56	62	64	[5] 51	52
East South Central	59	90	74	37	52	52	103	75	29	90
West South Central	92	78	61	66	38	98	54	31	61	55
Mountain	120	35	51	52	[8] 53	44	51	52	120	70
Pacific	49	72	49	50	55	28	34	31	31	41

[2] Hartford, Conn., Columbia, S. C., and Helena, Mont., not included.
[3] Fort Smith, Ark., not included.
[4] Pawtucket, R. I., not included.
[5] Savannah, Ga., not included.
[6] Hartford, Conn., not included.
[7] Columbia, S. C., not included.
[8] Helena, Mont., not included.

FOREIGN AND INSULAR

BRAZIL

Bahia—Mosquito index—Quarter ended June 30, 1930.—According to a recent report, there were no cases of yellow fever reported at Bahia, Brazil, during the quarter ended June 30, 1930. The *Aëdes aegypti* index of the city was reported to be well under 10 during the quarter.

Work on the new water supply system for the city of Bahia was advancing rapidly.

CANADA

Provinces—Communicable diseases—Week ended September 6, 1930.—The Department of Pensions and National Health of Canada reports cases of certain communicable diseases for the week ended September 6, 1930, as follows:

Province	Cerebrospinal fever	Dysentery	Influenza	Poliomyelitis	Smallpox	Typhoid fever
Prince Edward Island [1]						
Nova Scotia				3		6
New Brunswick						3
Quebec				3		18
Ontario	5		2	64	2	14
Manitoba				2		3
Saskatchewan				1		3
Alberta	1			13		1
British Columbia		1				3
Total	6	1	2	86	2	51

[1] No case of any disease included in the table was reported during the week.

Quebec Province—Communicable diseases—Week ended September 13, 1930.—The Bureau of Health of the Province of Quebec, Canada, reports cases of certain communicable diseases for the week ended September 13, 1930, as follows:

Disease	Cases	Disease	Cases
Cerebrospinal meningitis	2	Puerperal fever	1
Chicken pox	12	Scarlet fever	57
Diphtheria	32	Tuberculosis	47
Erysipelas	1	Typhoid fever	18
Measles	24	Whooping cough	31
Poliomyelitis	1		

DENMARK

Communicable diseases—June, 1930.—During the month of June, 1930, cases of certain communicable diseases were reported in Denmark as follows:

Disease	Cases	Disease	Cases
Cerebrospinal meningitis	10	Mumps	906
Chicken pox	21	Paratyphoid fever	15
Diphtheria and croup	311	Poliomyelitis	2
Erysipelas	194	Scabies	592
German measles	12	Scarlet fever	161
Influenza	2,415	Typhoid fever	10
Lethargic encephalitis	5	Undulant fever, (Bac. abort. Bang)	35
Measles	1,819	Whooping cough	1,193

FRANCE

Alsace-Lorraine—Poliomyelitis.—A report dated August 28, 1930, states that 331 cases of poliomyelitis had been reported in the city of Strasbourg and its environs up to August 25. The epidemic seemed, however, to be abating, 7 cases having been reported during the period from August 11 to 25 as compared with 35 cases during the preceding 10-day period.

The disease has been centered around Strasbourg and the localities to the north and northeast. Of the 561 communes constituting the Bas-Rhin, 95 were reported to be affected on August 25.

GREAT BRITAIN

England and Wales—Vital statistics—April–June, 1930.—During the second quarter of the year 1930, 170,212 births and 111,353 deaths were registered in England and Wales, giving a birth rate on an annual basis, of 17.2 per 1,000 population, and a death rate of 11.3 per 1,000. The figures are provisional. The mortality of infants under 1 year of age was 57 per 1,000 live births.

During the 13 weeks ended June 28, 1930, deaths from certain communicable diseases were reported in 107 county boroughs and great towns, including Greater London, as follows:

Disease	Number of deaths	Death rate per 1,000 population	Disease	Number of deaths	Death rate per 1,000 population
Diarrhea and enteritis (under 2 years)	573		Scarlet fever	105	0.02
Diphtheria	464	.09	Smallpox	6	
Influenza	471	.10	Typhoid fever	31	
Measles	1,044	.21	Whooping cough	331	.07

Deaths from certain communicable diseases were reported in 158 smaller towns for the quarter ended June 30, 1930, as follows:

Disease	Deaths	Disease	Deaths
Diarrhea and enteritis (under 2 years)	87	Scarlet fever	20
Diphtheria	90	Smallpox	1
Influenza	154	Typhoid fever	4
Measles	151	Whooping cough	63

England and Wales—Communicable diseases—Thirteen weeks ended June 28, 1930.—During the 13 weeks ended June 28, 1930, cases of certain communicable diseases were reported in England and Wales as follows:

Disease	Cases	Disease	Cases
Diphtheria	15,483	Puerperal pyrexia	1,300
Ophthalmia neonatorum	1,442	Scarlet fever	24,548
Pneumonia	12,932	Smallpox	4,217
Puerperal fever	631	Typhoid fever	895

Scotland—Vital statistics—Quarter ended June 30, 1930.—The Registrar General of Scotland has published the following statistics for the second quarter of the year 1930:

Population, estimated	4,879,700
Births	24,816
Birth rate per 1,000 population	20.4
Deaths	15,886
Death rate per 1,000 population	13.1
Marriages	8,283
Deaths under 1 year	1,822
Deaths under 1 year per 1,000 births	73
Deaths from—	
Bronchitis	817
Broncho-pneumonia	591
Cerebrospinal meningitis	74
Diabetes	133
Diphtheria	92
Dysentery	1
Erysipelas	51
Heart disease	2,132
Influenza	118
Deaths from—Continued.	
Lethargic encephalitis	24
Malaria	2
Measles	332
Nephritis (acute)	58
Nephritis (chronic)	426
Paratyphoid fever	5
Pneumonia	783
Poliomyelitis	5
Puerperal sepsis	57
Scarlet fever	28
Syphilis	24
Tetanus	2
Tuberculosis (pulmonary)	828
Tuberculosis (other forms)	388
Typhoid fever	6
Whooping cough	236

ITALY

Communicable diseases—Four weeks ended June 8, 1930.—During the four weeks ended June 8, 1930, cases of certain communicable diseases were reported in Italy as follows:

Disease	May 12-18		May 19-25		May 26-June 1		June 2-8	
	Cases	Communes affected	Cases	Communes affected	Cases	Communes affected	Cases	Communes affected
Anthrax	14	12	11	11	21	18	12	12
Cerebrospinal meningitis	18	15	13	13	8	8	16	16
Chicken pox	369	136	287	130	267	138	357	135
Diphtheria and croup	480	284	387	229	364	201	324	195
Dysentery	7	6	11	4	4	4	3	3
Lethargic encephalitis	4	3			1	1	5	4
Measles	3,148	477	3,181	485	3,061	445	2,711	446
Poliomyelitis	5	5	8	7	9	8	12	9
Scarlet fever	386	148	419	136	401	136	378	144
Smallpox	1	1						
Typhoid fever	307	172	270	146	267	172	300	164

MEXICO

Tampico—Communicable diseases—August, 1930.—During the month of August, 1930, certain communicable diseases were reported in Tampico, Mexico, as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Diphtheria	4		Tuberculosis	40	27
Enteritis, various		32	Typhoid fever	3	4
Malaria	195	9	Whooping cough	8	1
Measles	6	2			

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CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

From medical officers of the Public Health Service, American consuls, International Office of Public Hygiene, Pan American Sanitary Bureau, health section of the League of Nations, and other sources. The reports contained in the following tables must not be considered as complete or final as regards either the list of countries included or the figures for the particular countries for which reports are given.

CHOLERA

[C indicates cases; D, deaths; P, present]

Place		Mar. 9–Apr. 5, 1930	Apr. 6–May 3, 1930	May 4–31, 1930	June 1–28, 1930	Week ended— July, 1930 5	12	19	26	August, 1930 2	9	16	23	30	September, 1930 6	13	20
Afghanistan	C						[1] P						P				
China:																	
Canton	C			3	2		2	1									
	D						1										
Shanghai	C													8	4		
Swatow	C			3	7					1							
India	C	10,817	41,462	56,311	37,102	6,728	5,520	5,701	8,172								
	D	5,866	27,906	44,878	25,711	3,712	3,095	3,133	3,882								
Bassein	C		7	7											1		
	D		5	5													
Bombay	C	4								3	2	3	6				
	D									2	1	1	4				
Calcutta	C	354	647	609	327	81	53	49	37	18	10	17	18	8	10		
	D	220	414	372	179	54	28	23	23	7	7	10	6	3	3		
Negapatam	C				1												
	D				1												
Rangoon	C	2	1	9	6	1				1					1		
	D	2	1	3	4	1				1							
India (French):																	
Chandernagor	C	1	6	6	3			1									
	D	3	5	6	2												
Karikal	C	12	1		3												
	D	9	1		3												
India: Portuguese	C											P					
Indo-China (see also table below):																	
Pnompenh	C		2	1	40	9	16	7		5	3	3					
	D	6		5	18	6	9	5	2	3	2	1					
Saigon and Cholon	C	14	76	160	48	7	1	1	1		2	1					
	D	6	55	101	23	3					1						

[1] An outbreak of cholera was reported in June, 1930, in Afghanistan.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

CHOLERA—Continued

[C indicates cases; D, deaths; P, present]

Place		Mar. 9–Apr. 5, 1930	Apr. 6–May 3, 1930	May 4–31, 1930	June 1–28, 1930	Week ended— July, 1930 5	12	19	26	August, 1930 2	9	16	23	30	September, 1930 6	13	20
Philippine Islands:[1]																	
Ports—																	
Cebu	C				1	20	13	13	9	5	4			1	1		
	D					9	7	12	8	4	4			1	1		
Iloilo	C						1	11	17	9	19	32	4	3	4	1	2
	D							9	13	10	18	19	9	4	5	2	3
Manila	C			1							1			16	13	5	4
	D													5	6	1	
Provinces—																	
Antique	C									14	3		3	2	21	12	8
	D									7	3		2	1	10	12	7
Bohol	C										54	54	31	24	26	4	1
	D										29	32	15	11	11	2	
Bulacan	C				3		1	1	2	1				1	1	1	
	D				1									1			
Capis	C							2	1	1	1			1			
	D							1	1	1	1						
Cebu	C			1	355	313	222	115	63	55	26	4		1	16	8	
	D			1	170	131	83	60	29	32	15	3		1	6	4	
Iloilo	C				2	20	45	85	159	143	209	127	88	74	57	66	46
	D				1	10	23	64	96	77	143	91	64	51	44	37	26
La Union	C						1										
Leyte	C				47	11											
	D				19	11											
Masbate	C				10	14	32	25	21	15	19						
	D				3	2	18	5	10	5	9						
Misamis, Occidental	C					1	2										
	D					1	2										
Negros, Occidental	C			10	140	62	163	172	171	151	79	45	72	40	47	21	15
	D			7	88	42	90	122	114	97	64	33	47	31	32	18	9
Negros, Oriental	C					1	1	6	15	6	2						
	D						1	3	9	1	3						
Nueva Acija	C								1								
	D								1								
Pampanga	C				2	2								1			
Pangasinan	C																

Pangasinan	C					2		1		1									
	D					2				1									
Rizal	C				1		1												
	D				1		1												
Samar	C										5	3	10			2	1		
	D										5	3	8			2			
Surigao	C										15	2	21	3					
	D										9	2	10	3					
Tarlac	C									1									
Siam	C	1	29	33	27	8	3	8	1				15						
	D		13	21	19	4	1	3	1				1						
Bangkok	C	2	15	9	12		3	4	1	1		1							
	D	1	4	3	5		1	1	1	1		1							
Nagara Pathom	C		10																
	D		2																
Songkla	C						8		2										
	D						4		2										
On vessel:																			
S. S. Sassari at Massoua, from Jeddah	C			1															
	D			1															
On small boat at Port Cebu, from Bantayan Island	C				1														
	D				1														

Place		February, 1930	March, 1930	April, 1930	May, 1930			June, 1930			July, 1930			August, 1930	
					1-10	11-20	21-31	1-10	11-20	21-30	1-10	11-20	21-31	1-10	11-20
Indo-China (French) (see also table above):															
Annam [1]	C	4	52	60		20	3	2	14				1		3
Cambodia [1]	C	90	81	24	5	31	52	56	88				43	37	22
Cochin-China [1]	C	65	82	48	188	224	259	147	126				46	22	5

[1] Reports incomplete.
[2] Figures for cholera in the Philippine Islands are subject to correction.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

PLAGUE

[C indicates cases; D, deaths; P, present]

Place		Mar. 9–Apr. 5, 1930	Apr. 6–May 3, 1930	May 4–31, 1930	Week ended— June, 1930				July, 1930				August, 1930					September, 1930	
					7	14	21	28	5	12	19	26	2	9	16	23	30	6	13
Algeria:																			
Algiers	C									1	2			1		6	1	2	
Constantine	C				1				1										
Oran	C										2	1	1	1	1	1	1	2	3
Philippeville	C																	1	
Azores: Ponta Delgada	C		8																
	D		5																
Belgian Congo	C								2				1		1		2	3	
	D								2				1		1			3	
British East Africa (see also table below):																			
Tanganyika	C		44																
	D		20																
Uganda	C	98	117	227	121	77	105	103		50	100	78	52						
	D	87	105	195	75	70	93	90		47	97	69	50						
Canary Islands: Las Palmas	D													1					
Ceylon:																			
Colombo	C	4	1	6	1				1	2					1	1	2		
	D	4	1	5	1				1	2					1	1	3		
Plague-infected rats		2	4		1														
Chile: Antofagasta	C	1	1																
	D	2	1																
China: Manchuria—Tunglian and Nungan	C																		P
Dutch East Indies:																			
Batavia and West Java	C	124	87	82	19	27	28	24	19	25	18	22	19	30					
	D	122	81	82	19	27	28	24	19	25	18	22	19	30					
Plague-infected rats		3	8	5	3	1								1					
Java and Madura	D	223	173	185	40	45	63	54	55	56	58	48	45	51					
Ecuador (see table below).																			
Egypt:																			
Alexandria	C	4	2	13	3	6	6	4	8	8	3	4	2	2	4	3	3	3	2
	D	1	2	3	2		2	5	2	3	2	3	2	1	3		5	1	2
Assiout	C		14	20	4	2	3		1	1									
	D		5	5		1		2	1	1									

Beheira	C	4														1			
Beni-Suef	C	4																	
Dakahlieh	C	5	5	11	1														
	D	1		2															
Gharbieh	C		1									3							
	D		1									1							
Girga	C		1							1							1		
Minieh	C			7	1	1	4	4	2	1									
	D			1		1													
Port Said	C		1	2	1			1				1	1						
France:																			
Marseilles	C																2	2	1
St. Ouen	C										1								
	D										1								
Gambia	C															4			
	D															4			
Greece (see also table below):																			
Patras	C	1					1				1								
Pyrgos	C	1																	
Hawaii Territory, Hamakua, Hawaii: Plague-infected rats							1												
India	C	4,087	2,215	648	55	59	62	64	70	75	87	145							
	D	3,344	1,960	635	42	52	43	50	46	46	62	102							
Bassein	C	3															1		
	D	1															1		
Bombay	C	7	4	6	1		2					1						1	
	D	5	8	5			1	1				1						1	
Plague-infected rats		86	108	81	6	7	8	5	13	14	10	15	10	8	9	9	12	9	
Madras Presidency	C	157	44	38	26	10	3		10	1	10	26	35		7				
	D	87	19	11	15	2	5		4	1	9	17	13		1				
Rangoon	C	3	5	4				1				2	2	1			2	1	
	D	3	4	3				1				2	1	1			2	1	
Plague-infected rats		3	4	5			1		2	2		2	4		2	1	2		
India (Portuguese)	D			7											P				
Indo-China (see also table below):																			
Pnompenh	C		3	3	6					1	1			2		2	2	1	
	D	13	4	1	5	1		1		1	1								
Saigon and Cholon	C	1		1	1		1											1	
	D	1					1												
Iraq: Baghdad	C	7	6	37	12	4	8	4	10	4	2	2	4	3	2				
	D	4	2	18	7	3	5		5		1	1		2	1				
Japan: Osaka (vicinity of)—Plague-infected rats		4	3																
Kwang-Chow-Wan	C	7	37	34	23		8					4			1				
Madagascar (see also table below): Tamatave	C		1		1														P
Morocco	C	55	121	71	2		1					1		8	7				
	D	18	45	34	4									1	1				
Nigeria: Lagos	C	13		2	1		3	1	1				2	1	3	1		1	
	D	5		2	1		3	1	1				2	1	3	1			
Plague-infected rats		25	7	17	1	4	1	5	2	3	6	7			4	4			

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

PLAGUE—Continued

[C indicates cases; D, deaths; P, present]

Place		Mar. 9–Apr. 5, 1930	Apr. 6–May 3, 1930	May 4–31, 1930	Week ended— June, 1930				July, 1930				August, 1930					September, 1930	
					7	14	21	28	5	12	19	26	2	9	16	23	30	6	13
Senegal (see table below).																			
Siam	C	16	5	5									2	3					
	D	15	6	4									1	3					
Bangkok	C	5		5									1	2					
	D	4		4										2					
Nagara Pathom	C	1	10																
	D	1	9																
Nagara Rajsima	C	1	1										1			1			
	D	1	1										1			1			
Syria: Beirut	C					2	5	5		2	4	3		1	2	1	3	2	
Tripolitania	C																		
Tunisia:																			
Sfax district	C		1	21	6		3					6		1					
Tunis	C	1	4	1		1				1	4								
	D				1					1									
Union of Socialist Soviet Republics:																			
Salsk Region	C				1			1			3	2	4		3				
	D				1						2	2	3		2				
Stavropol Region	C				1														
	D				1														
Union of South Africa:																			
Cape Province	C	1		P	1						1								
	D	1									1				1				
Orange Free State	C	5	1																
	D	3																	
Transvaal	C	1																	
	D	1																	

Place		March, 1930	April, 1930	May, 1930	June, 1930	July, 1930	August, 1930
British East Africa (see also table above):							
Kenya	C	85	16	171	107	97	27
Ecuador: Guayaquil	C	2	0	0	0	-------	-------
	D	0	0	0	0	-------	-------
Plague-infected rats		2	0	0	0	-------	-------
Greece (see also table above)	C	-------	1	-------	1	-------	-------
Indo-China (see also table above)	C	27	4	-------	11	1	2
Madagascar (see also table above):							
Ambositra Province	C	25	14	1	-------	-------	-------
	D	20	12	1	-------	-------	-------
Antisirabe Province	C	38	46	19	3	-------	-------
	D	36	45	19	3	-------	-------
Itasy Province	C	4	-------	-------	-------	-------	-------
	D	4	-------	-------	-------	-------	-------
Miarinarivo Province	C	14	1	5	1	-------	-------
	D	14	1	5	1	-------	-------

Place		March, 1930	April, 1930	May, 1930	June, 1930	July, 1930	August, 1930
Madagascar (see also table above)—Con.							
Moramanga Province	C	5	3	1	3	-------	-------
	D	5	3	-------	3	-------	-------
Tananarive Province	C	52	39	15	16	-------	-------
	D	52	38	14	16	-------	-------
Senegal:							
Baol [1]	C	18	24	13	2	62	39
	D	8	12	11	2	48	11
Dakar [1]	C	-------	2	52	53	140	56
	D	-------	2	42	117	122	46
Louga [1]	C	-------	33	54	60	138	49
	D	-------	10	27	21	103	20
Thies [1]	C	3	12	21	52	54	20
	D	2	9	8	35	30	8
Tivaouane [1]	C	11	71	135	43	119	29
	D	8	38	69	28	70	24

[1] Incomplete reports.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

SMALLPOX

[C indicates cases; D, deaths; P, present]

Place		Mar. 9–Apr. 5, 1930	Apr. 6–May 3, 1930	May 4–31, 1930	Week ended— June, 1930 7	14	21	28	July, 1930 5	12	19	26	August, 1930 2	9	16	23	30	September, 1930 6	13
Algeria:																			
Algiers	C	5	1	3						1				1		2			
Constantine	C						1				1								
Oran	C	1																	
Arabia: Aden	C	3	1						1										
Bolivia: La Paz [1]																			
British East Africa (see also table below):																			
Tanganyika	C	103	57	409	385	755	196	274	64	4		100	26	51					
	D	7	14	70	154	90	31	26	13	2		27	4						
British South Africa:																			
Northern Rhodesia	C	9	1	59															
	D		2	9															
Southern Rhodesia	C		66	155	75	1	3		1	12	18								
	D		1	13															
Canada:																			
Alberta	C	10	4							2	1	2	1						
Edmonton	C	4	3																
British Columbia—Vancouver	C	20	17	4	1	1			2	2	1	1	1	1		2			1
Manitoba	C	4	4	10			4												
Ontario	C	100	77	82	14	10	13	10	3	5	6	10	8		5	4			6
North Bay	C			1															
Ottawa	C	19	21	25	6		8	1	1	1	4	7	5	1	1		2	1	2
Toronto	C			4	2	1	1			1									1
Quebec	C							4	3					2		1			
Montreal	C												7						
Saskatchewan	C	47	41	39		12	10			2		3				8			1
Regina	C			4															
Ceylon: Angoda, Western Province	C		6																
	D		2																
China:																			
Canton	C	6	3		1														
	D	2	3																
Chungking	C		P	P	P			P	P	P	P	P	P		P				

Chungking	C		P		P		P				P		P		P		P		P		
Foochow	C		P		P		P		P		P		P		P						
Hong Kong	C	38	18	12	2	1	1			2											
	D	25	23	9	1		1	1		1											
Manchuria—																					
Harbin	C		1	20	4																
Kwantung—Dairen	C		2	8		11	5		8												
	D			4			1														
Nanking	C	P	P	P	P	P				P	P	P	P	P	P						
Shanghai—																					
Foreigners only	C	2	3	2	1	1	1	2	1	1	1	1	3								
Including natives	D	10	10	5	1		1	1													
Swatow	D	6	3	6	1		1	2	1				1		2		1				
Tientsin	C	2	2	1																	
Chosen (see table below.)																					
Colombia:																					
Barranquilla	C	2	1																		
Buenaventura	C		15	4	1	1		4	4	3	2	1		1	1						
Costa Rica:																					
Port Limon	C		6	2	2																
San Jose [1]	C	10	7	2																	
Curacao (alastrim)	C	14	2	2		1			2					1							
Dutch East Indies:																					
Borneo	C	185	90	16	2	10				2											
	D	12	31	1		1															
Java—																					
Batavia and West Java	C	78	64	12	1	4	6	2	3	1	3	1	1		1	2					
	D	6	11	7		1	2		2	1	1	1	1		1	2					
East Java and Madura	C		4								1										
Sanggi Islands	C	5	160	26							11		36								
	D	1	24	5							3		2								
Sumatra	C	48																			
	D	5																			
Egypt: Port Said	C		1	1						2		1									
Great Britain:																					
England and Wales	C	1,700	1,427	1,417	237	266	241	182	156	138	126	109	70	86	95	93		106			
Ashton under Lyne	C	15	18	17			3	4		4	2	2									
Bradford	C		3	2					1												
Cardiff	C	2	3						2												
Leeds	C	16	2						1												
London	C	710	602	637	130	136	125	107	84	52	62	48	36	50	41	51		44			
London and Great Towns	C	1,239	1,066	1,078	197	208	190	158	127	96	102	83	61	73	71	80	79	84			
	D	3	3																		
Sheffield	C	8	2																		
Stoke-on-Trent	C	122	85	62	3	10	15	4	3	2	1	3	1	1							
Scotland	C				1		3			1								5			
	D									1											
Honduras: Naco	C																				5

[1] From Jan. 1 to May 31, 1930, 44 deaths from smallpox were reported in La Paz, Bolivia.
[2] 5 cases of smallpox were reported Apr. 14, 1930, in Costa Rica outside of city of San Jose.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

SMALLPOX—Continued

[C indicates cases; D, deaths; P, present]

Place		Mar. 9–Apr. 5, 1930	Apr. 6–May 3, 1930	May 4–31, 1930	Week ended— June, 1930				July, 1930				August, 1930					September, 1930	
					7	14	1	28	5	12	19	26	2	9	16	23	30	6	13
India	C	39,329	34,843	22,835	3,686	3,550	3,174	2,552	2,258	2,006	1,853	1,513							
	D	9,109	6,983	5,451	1,065	913	905	648	733	580	577	458							
Bombay	C	718	430	218	36	35	23	19	17	15	11	7	6	2		2		1	
	D	431	270	161	27	23	19	10	13	9	9	2	5	2		2		1	
Calcutta	C	361	495	302	46	45	45	25	27	19	13	14	4		12	9		5	
	D	305	403	258	50	37	29	30	17	17	12	10	4		8	9		4	
Cochin	C	291	183	37	4	1	10	1			4	2	2	4	4	4	1		
	D	35	13	8	2	1	1										1		
Karachi	C	33	30	14	5		1	1				1	2		2				
	D	47	17	4	2		1						2		1				
Madras	C	173	133	72	9	10	8	8	6	10	17	16	19		9	10	9	11	
	D	36	27	15	6	3	1		4	1	3	4	3		5	3	1	1	
Moulmein	C	146	43	89		9	6	6	4	10	3	1				2	1		
	D	41	7	21		3	3	1	3	4	1	2				1			
Negapatam	C			1		1		1			1		2		2		1	2	
Rangoon	C	10	4	6	1	5	1	2	2	1	1		1	1	1				
	D	5		1			1	1											
Tuticorin	C			5			1												
Vizagapatam	C	69	6	5		1													
	D	18	2	3															
India (French):																			
Chandernagor	C	6	10	24	4	8	5	2	3	1	4								
	D	2	2	7			2	1	1	1	1								1
Karikal	C	24	19	12	4	3	1	3	1		1			8		1		5	
	D	7	8	3	2	2	1	3	1		1			8		1		2	
Pondicherry Province	C	21	24	40	4	4	9	6	4	9	8	5	7	8				7	1
	D	13	20	36	4	4	9	6	3	9	8	5	7	8				7	
India (Portuguese)	C	38	44	47		3	18	7	1				1	6					
	D	2	8	8		2	2	6				1	1						
Indo-China (see also table below):																			
Pnompenh	C			3							1								
	CD		2		1						1				1				
Saigon and Cholon	C	3	5	3	1									1					
	D	1	5	2									1	1	1		1		

Iraq:

Iraq:																			
Baghdad	C		8	1	1				1	1	1				1				
	D		1	1							1				1				
Basra	C		1																
Mossoul Liwa	C		22	21		1		3	47	20									
	D		3	3		1			19	1									
Ivory Coast. (See table below.)																			
Jamaica (alastrim)	C			2															
Japan: Tokyo	C		1																
	D		1																
Macao	D	3	2	1															
Mexico (see also table below):																			
Jalisco (State) Guadalajara	D	22	20	7	4		5	6	3	1				1					
Juarez	C	2					6							2					
	D						1							1					
Mexico City and surrounding territory	C	106	99	80	17	23	20	17	10	12	4	11	2	3	3		7		
	D	31	47	32	5	4	3	5	2	3	1	2	1	3	2		1		
Progreso	C			1															
	D			1			1												
Morocco. (See table below.)																			
Nigeria: Lagos	C	1	1					1											
Poland	C		7	3															
Portugal:																			
Lisbon	C	7	8	8	1		2	7		7		6		6	19	25	7	8	
Oporto	C															1			
Rumania	C	2																	
Siam	C		8	2					2		4								
	D		4								3								
Somaliland, British: Boales	C	2																	
	D	6																	
Spain	C					4		8		1	1	3	2						1
Straits Settlements	C	5	5	11	5		1	3	1	2	7	1	1	1	1	5	1	2	
	D	1	2	3	1		1		1	1	1				1	1		1	
Sudan (Anglo-Egyptian)	C	60	42	19	4	8	1	54	8	1		3				42	102	5	20
	D	5	4	2				3		1						3	50	2	
Sudan (French). (See table below.)																			
Switzerland: Berne Canton	C											1	1	1					
Syria. (See table below.)																			
Taiwan: Taihoku. (See table below.)																			
Tunisia: Tunis	C	3	4	2			2					1							
Turkey. (See table below.)																			
Union of South Africa:																			
Cape Province	C	P	P	P								P							
Orange Free State	C	P									P	P	P						
Transvaal	C	P												P					
Upper Volta	C	2	3	1			8	5											
Zanzibar	C	13																	
On vessel:																			
S. S. Elysia, at Port Sudan, from Bombay	C		1																
S. S. Naldera, at Port Said	C			1															
S. S. Manoa, from Honolulu to San Francisco	C								1										

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

SMALLPOX—Continued

[C indicates cases; D, deaths; P, present]

Place		February, 1930	March, 1930	April, 1930	May, 1930			June, 1930			July, 1930			August, 1930	
					1-10	11-20	21-31	1-10	11-20	21-30	1-10	11-20	21-31	1-10	11-20
Indo-China (see also table above)	C	434	26	261	-------	173	132	80	133	-------	-------	-------	238	59	34
Ivory Coast	C	-------	7	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------
Sudan (French)	C	213	609	521	40	56	178	76	-------	-------	-------	34	-------	-------	-------
	D	11	49	36	7	7	18	18	-------	-------	-------	-------	-------	-------	-------
Syria: Beirut	C	18	17	19	-------	-------	7	6	1	-------	-------	-------	2	-------	-------
Taiwan: Taihoku	C	43	58	12	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------

Place		February, 1930	March, 1930	April, 1930	May, 1930	June, 1930	July, 1930
British East Africa (see also table above):							
Kenya	C	12	175	174	171	142	-------
Uganda	C	109	-------	-------	78	-------	-------
	D	99	-------	-------	69	-------	-------
Chosen	C	263	236	253	107	-------	-------
	D	71	53	53	35	-------	-------
Seishin	C	4	-------	5	2	-------	-------
	D	1	-------	1	1	-------	-------

Place		February, 1930	March, 1930	April, 1930	May, 1930	June, 1930	July, 1930
France	C	23	8	58	51	-------	-------
Mexico: Durango (see also table above)	D	6	5	4	4	3	3
Morocco	C	74	17	10	18	5	3
Turkey	C	114	-------	3	16	-------	-------
	D	42	-------	-------	-------	-------	-------

TYPHUS FEVER

TYPHUS FEVER

Place		Mar. 9–Apr. 5, 1930	Apr. 6–May 3, 1930	May 4–31, 1930	Week ended— June, 1930 7	14	21	28	July, 1930 5	12	19	26	August, 1930 2	9	16	23	30	September, 1930 6	13
Algeria:																			
Algiers	C	6	8	15	2		1			1	2	3				2		3	
Constantine Department	C	11	15	6	11		1			1	1					3			
Oran	C			3				4		2	1			1			1		
Arabia: Aden	C	1																	
	D	1																	
Bolivia: La Paz.[1]																			
Brazil: Porto Alegre	C			1															
Bulgaria	C	9	15	6	1		9	6		4	5	1		1				2	
	D		1	2	1						1								
China:																			
Manchuria—Harbin (see also table below)	C	4	52	13	3	3	2		2										
Shanghai	C	1												1					
Chosen. (See table below.)																			
Czechoslovakia. (See table below.)																			
Egypt:																			
Alexandria	C		1				1	1	1						1			1	
Beheira Province	C	2	2	49	17	16	7	5		5	1	9							
	D			13	1	1		2		1		1							
Cairo	C												2			5			
Port Said	C															4		1	
Great Britain: Scotland—																			
Dunfermline	C									1									
Glasgow	C			1															
	D			1															
Greece (see table below):																			
Iraq: Baghdad Liwa	C	2																	
Ireland:																			
Irish Free State—																			
Galway County—Oughterard	C											2							
Kerry County—Dingle	C		5																
Leitrim County—Mohill	C							9				1							
Mayo County—																			
Ballina	C			2		1				1									
Castlebar	C															1			
Swinford	C			14															
Westport	C										2		1						

[1] 12 deaths from typhus fever were reported in La Paz, Bolivia, from Jan. 1 to May 31, 1930.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

TYPHUS FEVER—Continued

[C indicates cases; D, deaths; P, present]

Place		Mar. 9–Apr. 5, 1930	Apr. 6–May 3, 1930	May 4–31, 1930	Week ended— June, 1930 7		21	28	July, 1930 5	12	19	26	August, 1930 2	9	16	23	30	September, 1930 6	13
Ireland—Continued.																			
Irish Free State—Continued.																			
Roscommon County—																			
Roscommon	C										1								
Strokestown	C										1								
Wicklow County—Shillelagh	C					1		3	1		1								
Latvia. (See table below.)																			
Lithuania. (See table below.)																			
Mexico: Mexico City, including municipalities in Federal District	C	4	4	6	2	3	1	3	2		2	1	2	2	2		2		
	D	1	4	3		1							1	1					
Morocco	C	38	15	11	1		6	8		4	3	4				8		2	
	D	7	3																
Palestine	C	6	1	2	2				3	1	1	1		1	1	1		1	1
Poland	C	228	243	171	39	15	26	37		24		12	10	15	2	7		3	
	D	13	15	5	3	3	2	3		4			1		1	1		1	
Portugal:																			
Lisbon	C		4																
Oporto	C	2	1												1				
Rumania	C	185	186	227		32	26												
	D	12	11	35		3	2												
Spain: Valencia	C					2		1		3									
	D									1									
Tunisia	C			6			2	16			14	10	2	5		3			
Turkey. (See table below.)																			
Union of South Africa:																			
Cape Province	C	P	P	P			P	P	P	P	P								
Natal	C	P	P	P			P		P	P	P	1							
Orange Free State	C	P		P			P	P	P	P	P								
Transvaal	C		P								P		P	P					
Yugoslavia. (See table below.)																			

Place		February, 1930	March, 1930	April, 1930	May, 1930	June, 1930	July, 1930
China: Harbin (see also table above)	C		37	204	240		
Chosen: Seoul	C	17		3	43		
Czechoslovakia	C	2	42	29	12	1	
Greece: Athens	C	6	3	1	3	3	6
Latvia	C				3	3	3
Lithuania	C	70	62	73	27	16	3
	D	5	4	4			
Turkey	C	3	1	3	16	2	
Yugoslavia	C	33	46	22	16	6	
	D	5	2	4	1		

YELLOW FEVER

	Cases
Brazil:	
Mage, on the Leopoldina Railway, between Rio de Janeiro and Nictheroy, Apr. 22, 1930	2
Campos, Rio de Janeiro Province, May 23, 1930	1
Para, June 23, 1930	2
Gold Coast:	
July 10, 1930	1
Albosso, Aug. 5, 1930 (deaths)	1
Liberia, Monrovia, June 3, 1930	1
Nigeria, Lagos, July 12, 1930 (probably laboratory infection)	1